

# Montana Outdoors



Rosebud Battlefield State Park  
**"WHERE THE GIRL  
SAVED HER BROTHER"**

**AUDUBON'S  
BIGHORN?**  
Debunking the myth

**YELLOWSTONE  
BISON**

How to control the overflow





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## Montana Outdoors

Volume 35, Number 6

## CONTENTS

# Montana Outdoors

November/December 2004

## FEATURES

**6 Buffaloed** Concerned about both its livestock industry and national image, Montana struggles to manage bison spilling from Yellowstone National Park. *By Tom Dickson*

**10 The Sheep That Will Not Die** Clinging to the myth of Audubon's bighorn. *By Brett French*

**16 A Big Prelude to the Little Bighorn** Rosebud Battlefield State Park preserves the pivotal battle grounds where the balance of power between the Army and the Indians shifted, leading to Custer's legendary defeat. *By Neil Mangum*

**22 Mountain Mallards** A plain discourse on duck shooting in the Rockies. *By Russell Chatham*

**26 The Chill of the Hunt** Is it insanity, hunting in weather like this? *Photo essay*

**32 Off to a Great Start** Since it began in 1987, Habitat Montana has helped ranching families statewide while protecting and enhancing more than 200,000 acres of wildlife habitat. *By Tom Dickson*



ROSEBUD BATTLEFIELD **16**

## DEPARTMENTS

**2 LETTERS**

**3 NATURAL WONDERS**

**3 OUR POINT OF VIEW** An Essential Session for Montana's Fish and Wildlife

**4 OUTDOORS REPORT**

**15 OUT HERE** Some Things to Do

**31 FIELD NOTES**

**34 RECOMMENDED READING**

**36 2004 MONTANA OUTDOORS INDEX**

**37 OUTDOORS PORTRAIT** Wolverine

**38 PARTING SHOT** Battlefield Stars

**COVER PHOTO:** A lone bull stands in sub-zero temperatures in Biscuit Basin, Yellowstone National Park. Learn the fate of this and other Yellowstone bison in our story on page 6. Photo by Michael H. Francis.

**OPPOSITE PAGE:** A hardy bowhunter leaks precious heat with each breath during an early morning midwinter wait. See more frozen hunters in our photo essay beginning on page 26. Photo by Craig and Liz Larcom.

## Another important Bob

You were remiss in your article "Forty Years of Wilderness" (September/October 2004) to not mention Bob Cooney, of Helena. Now 95 years old, Bob was hugely instrumental in the national wilderness movement.

JEAN ROBERTS  
White Sulphur Springs

## "Conservationist by passion"

Any description of wilderness preservation would not be complete without mention of Montana's own Stewart Brandborg. In 2000, The Wilderness Society bestowed its highest honor, the Robert Marshall Award, to Brandborg, a long-time conservation champion who lives near Darby. The award is inscribed: "To Stewart Brandborg, a forester by training and an expert on elk and mountain goats, a conservationist by passion and a veteran of conservation battles large and small, you have made a pronounced and permanent mark on the American landscape. Your pioneering leadership helped ensure passage of our seminal environmental laws, led to the rapid expansion of the National Wilderness Preservation System, helped preserve the great Alaskan wilderness for all generations and, not least, set for The Wilderness Society a pattern of fruitful collaboration with grassroots partners. For your lifetime of leadership, inspiration, and wisdom in the service of environmental conservation, The Wilderness Society confers upon you its highest honor: The Robert Marshall Award."

JACK LYNCH  
Helena

## More detail, please

In your article on wilderness areas you included a map show-



ing the 15 wilderness areas in Montana. Where would I get detailed maps of these areas?

DAVID GLEASON  
Billings

EDITOR REPLIES: *Order maps of Montana's wilderness areas by calling the U.S. Forest Service in Missoula at (406) 329-3511 or by going on-line at [www.fs.fed.us/r1/maps](http://www.fs.fed.us/r1/maps). The maps cost \$6 each.*

## Wilderness memories

I had not realized the depth of my homesickness until your September/October issue arrived. Having had the pleasure of growing up in Montana (on the Blackfoot River), I devoured each article, especially relishing the descriptions of the Bob and the many other great wilderness areas of Montana. Though now living in Wyoming, where I have enjoyed many of this state's delightful wilderness areas, perusing your magazine caused me to recognize how very much I miss my beautiful Montana.

Recently, I somehow managed to slide right past that mid-century mark, but reading the wilderness article I once again became that energetic teenager who marched through parts of the Scapegoat, alone. I was the young woman who took horse pack trips into the Bob, backpacked into every drainage of the Selway-Bitterroot, and spent four miserably cold and wet—but spectacular—days on a trip in the

Pintlers. I relived the time in the Bob when we had to shoot our horse, Shiek, because he broke his leg, and another time when,

at the top of Smith Pass in the Swan Mountains, one of our pack horses decided she would rather slide down a snowfield than step over a rock on the trail. Thank you for producing such an awesome and gorgeous magazine, and for awakening my forgotten treasures.

VONNIE HOLBROOK-STINETTE  
Casper, Wyoming

## Block Management fan

While reading the September/October issue I came upon the article "Will the Sun Set on Block Management?" I hope not. As Wisconsin residents, my friends and I have visited north-eastern Montana to pursue waterfowl and upland game and have been greatly impressed with the Block Management Program. There is no question that the reason we visit your state, and support the cafes, motels, and other businesses in that

region, is because of the access provided by this program. Another great attribute is the interaction Block Management creates between landowners and hunters. We have become friends with a host of Montanans we likely would not have met were it not for Block Management. I cannot put into words the deep and sincere gratitude each of us has for the people of your state who led this idea into reality. Block Management is unlike anything I know of in the United States. It stands alone as a banner of cooperation between landowners and sportsmen. Families such as mine will forever have memories and distant friends to revisit for years to come thanks to Block Management. I can't imagine any of us objecting to paying the reasonable financial costs necessary to continue what is truly an innovative and honorable program.

WINTON H. MILLER, JR.  
Stevens Point, Wisconsin

■ We welcome your comments, questions, and letters to the editor. We'll edit letters as needed for accuracy, style, and length. Mail your letter to: *Montana Outdoors*, P.O. Box 200701, Helena, MT 59620-0701. Or e-mail us at: [tdickson@state.mt.us](mailto:tdickson@state.mt.us).



"Not a whole lot. What's new with you?"

**Q.** *Where and when will the next major earthquake in Montana occur?*

**A.** Western Montana is a place of high seismic activity, according to the state's Disaster and Emergency Services Division. The highest recurrence rate of large earthquakes in Montana is in the area around Hebgen Lake (West Yellowstone), followed by Helena and Three Forks. An earthquake event rating 6 or higher on the Richter scale occurs in the Helena-



Ovando region about every 70 years. The last one of that size in Helena was in 1935, when a series of earthquakes caused four deaths, many injuries, and \$4 million in damages, including the destruction of dozens of buildings.

**Q.** *I know fish can detect sound and pressure waves, but do any Montana fish actually generate sound waves to any purpose or advantage?*

**A.** The freshwater drum does. During the spring mating season, males of this close relative to the saltwater redfish vibrate a unique set of muscles and tendons against their balloonlike swim bladder. This produces a grunting sound thought to attract females from a distance. Anglers have reported hearing the strange sounds while fishing

the lower Yellowstone and Missouri rivers, where drum are found. In some states, drum are called croakers or thunder-pumpers for the sound.

**■** *Wonder about some part of Montana's natural world? E-mail us at: [tdickson@state.mt.us](mailto:tdickson@state.mt.us).*



**JEFF HAGENER** | *Director of Montana Fish, Wildlife & Parks*

## OUR POINT OF VIEW

### *An Essential Session for Montana's Fish and Wildlife*

THE UPCOMING 2005 LEGISLATIVE session will decide on three pieces of legislation crucial to the future of Montana's fish and wildlife resources.

The first is FWP's proposal, now being reviewed and considered by Montana sportsmen, to increase resident hunting and fishing license fees. The last resident fee increase was in 1994. Since then, inflation has eaten away at our buying power. For example, our agency relies heavily on gasoline to fuel the boats, trucks, and aircraft used to monitor fish and wildlife populations, conduct research, and enforce game laws. In the past year alone, the cost of gas has risen more than 30 percent.

In addition, we've had to take on many new responsibilities, such as managing wolves, whirling and chronic wasting diseases, river recreation conflicts, new fishing access sites, and web site development. While these costs and responsibilities grew, revenue from resident licenses remained flat. As a result, there's been a growing gap between the amount of money we spend to manage fish and wildlife and the amount we're taking in.

Currently, Montana has the lowest resident fees in the West; with the proposed increase, our resident fees would still be the lowest. For example, a fishing license would rise from \$13 to \$20 (average for neighboring states is \$20.50), and an elk license would change from \$16 to \$25 (neighboring states' average is \$33.50). Discounts for youth, seniors, disabled citizens, and sportsmen who buy combination licenses are included in this proposal. The increases would go into effect March 1, 2006.

(FWP is not proposing a fee increase for nonresident licenses because the legislature raised nonresident rates a few years ago. That pushed the disparity between resident and nonresident

fees to the limits of what federal courts will tolerate.)

In addition to maintaining existing programs, the fee increases will improve more fish and wildlife habitat, increase walleye stocking, create additional local fishing ponds, boost game law enforcement, help landowners reduce wildlife conflicts, and assist cities with urban nuisance wildlife. Without an increase, we'll be forced to make cuts in current programs and activities and will be unable to add new ones. During the next several months, hunters and anglers will need to decide whether license fees should be increased or FWP programs should be cut.

Two other important legislative items are the Habitat Montana (see page 32 of this issue) and Block Management programs. The hugely successful Habitat Montana Program has protected more than 200,000 acres of prime wildlife habitat statewide over the past 10 years. This protection has come at no cost to Montana taxpayers and has kept the land on the tax rolls. Primarily using conservation easements, in which FWP pays willing sellers to forego development rights, Habitat Montana is critical for conserving habitats supporting Montana's wildlife.

Block Management, the envy of many other states, is another successful program well worth saving. This year, Block Management will enroll nearly 9 million acres for public hunting access across the state.

The authorizing legislation for both programs is scheduled to "sunset" in early 2006. Lawmakers will decide in the 2005 session if these programs are worth continuing.

What do you think? Comment on any of the three pieces of legislation listed above by calling or e-mailing us at (406) 444-4038 or [raasheim@state.mt.us](mailto:raasheim@state.mt.us).

*M. Jeff Hagener*

## Bull elk ignore danger when dining

Bull elk in the northwestern part of the Yellowstone Ecosystem care more about food than anything else during the winter, and they're paying for it, according to Montana State University researchers.

Oblivious to danger at dinner time, bull elk in the Gallatin Canyon are roughly six times more likely than females to be killed by wolves, says Scott Creel, an ecologist studying wolf-elk interactions in the Porcupine, Tepee/Daly, and Taylor drainages between Bozeman and West Yellowstone. Cow elk, on the other hand, stop eating and grow increasingly wary when they sense wolves nearby.

"Because cows have more stored fat, they are in a better position than bulls to stop foraging, become vigilant, and seek cover when wolves are present," Creel says.

According to John Winnie, Jr., a doctoral candidate working with Creel, researchers originally thought bulls ignored wolves because bulls were "the big, bad dudes in town and wolves aren't going to mess

with them," he says.

But Winnie and Creel have learned that many bull elk enter winter famished, having lost more than 100 pounds from early September until early November.

"They probably can't afford to be as vigilant as cows," Winnie says. "They can't stop grazing, since they are already in such crummy shape."

The five-year research project, which began in 2000, is being conducted in cooperation with FWP wildlife biologist Ken Hamlin.

## Citizen's group gives thumbs up to access, habitat programs

A governor-appointed group of ranchers, hunters, anglers, and outfitters recently endorsed Montana's main hunting and fishing access and wildlife habitat programs. According to Darlyne Dascher, chairperson of the Private Land/Public Wildlife Council, the group voted unanimously in September to recommend to the governor and the legislature that Montana continue the state's Block Management Program,

as well as the Habitat Montana and Private Lands Fishing Access programs.

"The group felt very strongly that we need to maintain and expand these successful programs," says Dascher, who ranches near Fort Peck.

The 15-member council was established in 1993 to evaluate hunting and fishing access enhancement programs and other issues related to private lands and public wildlife.

Among the council's recent recommendations:

- Create new, additional funding sources for fishing and hunting access programs.
- Provide better incentives for landowners participating in Block Management.
- Improve Block Management maps and materials.
- Hire more game wardens and seasonal staff to improve the patrol, management, and enrollment of Block Management areas.

• Reauthorize the Block Management, Habitat Montana, and Private Lands Fishing Access programs.

The council urged expansion of Block Management to accommodate additional landowners and hunters, and to address regional hunting access and wildlife management needs. Without additional funding, the Block Management Program would need to reduce the amount of private land it enrolls.

Block Management was established in 1985 to provide hunting access to private land and help landowners manage public hunting. In 2004, more than 1,250 landowners enrolled 8.8 million acres in the program.

For more information about the PL/PW Council and its rec-

ommendations, go on-line to [fwp.state.mt.us/hunting/plpw](http://fwp.state.mt.us/hunting/plpw).

## Scientists study Yellowstone National Park's newest big game species

In the early 1980s, scientists found that mountain goats introduced to Olympic National Park were harming subalpine plant communities, including some rare species. Subsequently, goat numbers there had to be drastically reduced. Biologists are now looking at Yellowstone National Park to see if nonnative mountain goats could be doing the same thing there.

In a recent article in *Wildlife Society Bulletin*, FWP wildlife biologist Tom Lemke notes that nonnative mountain goats introduced by FWP into areas north of Yellowstone National Park in the 1940s through the 1960s have spread south and successfully colonized.

## HUNTING SAFETY



### Gun locks, no charge

Free gun locks and safety information are now available through the National Shooting Sports Foundation's Project ChildSafe. The free gun locks are available at FWP public shooting seminars, police stations, and many sporting goods stores.



JOHN WINNIE, JR.

John Winnie, Jr. with a bull elk that may have been too busy feeding to notice approaching predators.



Will the growing mountain goat population endanger native vegetation in Yellowstone National Park? Researchers are working to find out.

From 1993 to 2001, Lemke documented the number, age, and location of mountain goats during fall aerial surveys immediately north of and inside the park's north boundary. The animals live along rugged cliff faces and mountain ridge lines mainly at elevations above 8,750 feet. During his study, Lemke found that the number of goats in or near the park more than tripled.

Based on his findings, FWP established two new mountain goat hunting districts just north of Yellowstone in 1996.

Lemke also found that the animals are steadily expanding their range. Currently mountain goats occupy roughly 80 square miles of habitat in and around the park, and there is an additional 240 square miles of unoccupied potential habitat, mainly on the park's eastern border.

"It's too early to tell whether mountain goats will harm vegetation in Yellowstone," Lemke says. "But considering what happened in Olympic National Park and how fast goats are currently

increasing in Yellowstone, it's important that we monitor goat populations and vegetation."

Lemke explains that the park and the state of Montana have different management philosophies for mountain goats, which could lead to management conflicts. "FWP's policy is to support and maintain viable populations of mountain goats in suitable habitats, and, when possible, provide goat hunting opportunities," he says. "National parks, however, have a policy of reducing populations of exotic species that threaten native park resources. Any future management actions should be based on documented impacts of goats in Yellowstone, rather than what has happened elsewhere. Considering that goats will continue to disperse south-

ward from Montana, it's essential that there be state and federal cooperation to manage resources that cross political boundaries."

## Montana big game records now on-line

What size of antler or horn does it take to top the current state records for mule deer, antelope, and other big game species? Find out by checking the FWP website, which now features all state record book big game animals, minimum qualifying scores, and other information necessary for entering a trophy animal into the record book.

The web page includes links to the Pope and Young and Boone and Crockett clubs, along with information on the two record-keeping organizations and their big game scoring systems.

See the FWP website at [fwp.state.mt.us](http://fwp.state.mt.us), click "Hunting," then "Plan a Hunt," then "Big Game Records."



It probably isn't a state record, but check the FWP website just in case.

## Do the State Park TWIST

*Fun things you never expected to do in Montana's state parks*

Can you name one of the world's tallest free-standing brick structures? If the old Anaconda Copper Company's smelter stack does not immediately come to mind, it's time to visit

**Anaconda Smokestack State Park.** The park's 585-foot-tall smokestack is listed in the National Register of Historic Places. The park itself is tiny, however. The 12-acre site is open year-round but contains no facilities other than an interpretive sign.



## MONTANA HUNTING HOTSPOT



### Ninepipe WMA

Just an hour's drive north of Missoula, you'd think Ninepipe Wildlife Management Area wouldn't have a pheasant left after the opening weekend barrage. But it does. Despite being the most popular bird hunting area in western Montana, Ninepipe's 3,000-plus acres contain abundant habitat for pheasants and other upland birds, which find plenty of food and cover for hiding. Ninepipe also provides diverse wetlands that attract and hold waterfowl.





YELLOWSTONE NATIONAL PARK BISON BY JEFF HENRY/LOCHE JARVIS PICTURES

# Buffaloed

Concerned about both its livestock industry and national image, Montana struggles to manage bison spilling from Yellowstone National Park. **BY TOM DICKSON**

**A**S IF ALAN WASSON DIDN'T have enough to do running a ranch of 350 cows near Whitewater, a few miles south of Montana's border with Saskatchewan, the life-long rancher has also been forced to keep a watchful eye on Yellowstone National Park, several hundred miles to the south.

"If brucellosis shows up in the cattle down there, it will affect every cattle producer in this state," he says.

What concerns Wasson and other cattlemen is the growing number of bison spilling from the park. Yellowstone's population of shaggy ungulates is chronically infected with brucellosis, a disease that causes cows to abort. Montana ranchers maintain that the bison's spread threatens their industry.

State and federal officials agree that Yellowstone's burgeoning bison population requires some type of lethal control. Currently several hundred bison leaving the park are killed each year to prevent the ani-

mals from mixing with cattle grazing on adjacent U.S. Forest Service lands.

"Either we control bison numbers or we allow the population to keep growing and expanding to where it creates an even larger problem down the road," says Keith Aune, head of the Montana Fish, Wildlife & Parks (FWP) wildlife research program and one of the state's bison experts.

Many people don't see it that way, however. Animal rights groups and some federal lawmakers denounce any lethal control of Yellowstone bison. In a recent *National Parks* magazine editorial, West Virginia congressman Nick J. Rahall II called current bison removal efforts a "hysterical overreaction."

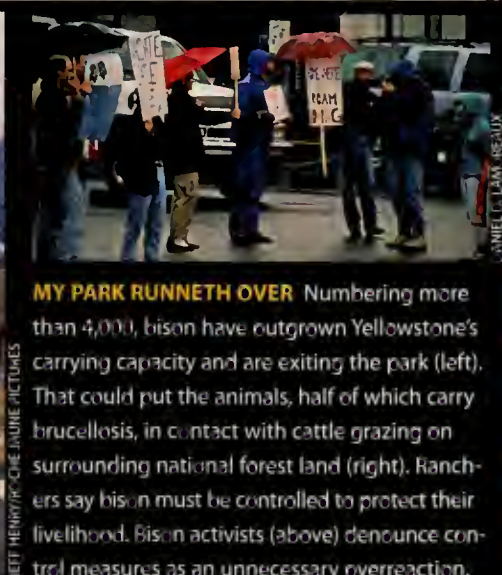
Adding to the conflict are plans by Montana to resume, as early as this winter, public hunting for some bison leaving the park. In the 1980s, hunters received a public relations black eye when national media depicted bison hunts as cruel and unsporting.

## AMERICAN ICON

Like the gray wolf and grizzly bear, the bison (commonly called buffalo) looms large in the public's imagination. The continent's largest land mammal, it once roamed across much of North America, from Florida north to the Alleghenies and west to the Rockies. The great herds fed predators and scavengers and provided sustenance and material for Indians, explorers, and early European settlers.

Easy to kill and dependent on large tracts of prairie, the continent's estimated 60 million bison were nearly wiped out in the late 1800s. The combination of hunters shooting for the market, railroads bisecting the plains, and cattle competing for range sent bison numbers plummeting to fewer than 1,000 by the turn of the century.

Recovery was led by President Theodore Roosevelt and other conservation-minded



**MY PARK RUNNETH OVER** Numbering more than 4,000, bison have outgrown Yellowstone's carrying capacity and are exiting the park (left). That could put the animals, half of which carry brucellosis, in contact with cattle grazing on surrounding national forest land (right). Ranchers say bison must be controlled to protect their livelihood. Bison activists (above) denounce control measures as an unnecessary overreaction.



sport hunters, who formed the American Bison Society in 1905. "The [near-] extermination of the buffalo has been a veritable tragedy of the animal world," Roosevelt wrote. The organization pressed Congress to establish herds in Yellowstone National Park and other public wildlife refuges.

The effort succeeded. Today, roughly 8,500 bison exist in the wild along with 500,000 on commercial ranches. The largest wild herds roam Yellowstone National Park (4,000-plus), South Dakota's Custer State Park (1,100), and preserves owned by The Nature Conservancy in Oklahoma (1,500) and Colorado (1,500).

Yellowstone's bison population has been growing steadily since the mid-1960s, when the park decided to let wildlife populations naturally regulate themselves. Though the idea was to allow nature (weather, starvation, and predators) to control bison numbers naturally, that hasn't happened. The park's bison population has grown steadily from 400 (when the new policy was put in place) to more than 2,000 in the mid-1980s.

Tom Dickson is editor of Montana Outdoors.

According to Aune, roughly 4,500 bison will inhabit the park this winter.

"It's not really working," says Aune of natural regulation. "Grizzly bears, wolves, and other predators don't take enough bison to keep numbers down, and when the weather gets bad, the bison just leave the park."

And that's where the conflicts begin.

## BRUCELLOSIS BROUHAHA

Common to cattle, bison, elk, and other ungulates, *brucellosis abortus* is a contagious disease that causes females to abort. The disease concerns wildlife managers, but it petrifies cattle ranchers. Over the past 40 years, the federal government, states, and livestock growers have spent several billion dollars to eradicate brucellosis in cattle. Currently, all but a few states have been designated by the U.S. Department of

Agriculture (USDA) as brucellosis free. Montana cattle have been without the disease since 1985.

Wild bison and elk are the last remaining reservoirs of brucellosis in the United States, and the most significant concentration of these infected wildlife live in and around Yellowstone and Grand Teton

national parks. Though never proven to be transmitted in the wild from bison to cattle (due perhaps to efforts to keep bison away from cattle), studies have confirmed transmission between captive bison and cattle.

"The risk is not huge, but it's also not zero," says Aune. "It's significant enough that a state could lose its brucellosis-free status."

That's no idle speculation. In 2004, the USDA revoked Wyoming's brucellosis-free certification after two separate herds of cattle, likely infected from elk concentrated at winter feeding grounds near Jackson Hole, were found with the disease. Steve Pilcher, executive vice president of the Montana Stockgrowers Association, says the revocation means Wyoming ranchers must test all the cattle they sell to other states to prove the animals are not infected.

"It's a huge time and cost burden," Pilcher says. "Montana stockgrowers don't want to go there."

Not everyone buys the brucellosis scare, however. "From November to June, there are no cattle in much of the West Yellowstone area, because the winters are too harsh for cattle, so there is no risk of brucellosis transmission," says Dan Brister, project coordinator with the Buffalo Field Campaign. The West Yellowstone-based group was formed to stop federal and state agencies from killing and harassing bison leaving the park. Brister says the U.S. Forest Service should close grazing allotments for the 2,000 or so cattle that graze in summer around Yellowstone National Park to reduce overlap between the livestock and



JUDY WANTULOK

**CENTER STAGE** Yellowstone, which contains North America's largest bison herd, sits at the center of the animal's historic range and the controversy over how bison should be managed.

MONTANA OUTDOORS



## BOS BISON: AN AMERICAN ICON

Depicted on U.S. currency and even the Interior Department's logo, the bison has grown to symbolize the unspoiled West as well as the American Indian's lost way of life. Among those who fought to save the species from extinction in the early 1900s, when total numbers dropped as low as 1,000, were sport hunters such as President Theodore Roosevelt (right). Lacking predators, bison numbers have increased since then to 500,000 in domestic herds and 8,500 in wild herds (far right).



YNF PHOTO ARCHIVES



CHANE HARGREAVES

bison. "We want buffalo to have access to public lands like elk and other wildlife," he says. "The way things stand now, cattle have precedence on public land, and that's not right."

### LIMITED MANAGEMENT OPTIONS

Allowing bison to continue expanding unchecked from the park is an option but probably not a realistic one. Even if grazing allotments on Forest Service land were restricted, the bison would eventually make their way to private cattle range, housing developments, roads, and other areas where they could create problems.

And yet, it would be just as unrealistic to test and then kill all infected bison in Yellowstone to eliminate the disease, as some ranchers demand. For nearly a century, the charismatic animal has been iconic of Indian and American cultures, appearing on the nickel and the U.S. Department of the Interior logo. What's more, Yellowstone National Park is considered hallowed ground. National public outcry would likely halt attempts to kill large numbers of bison within the park. Containment would not work, either, because few people would tolerate an 8-foot-tall woven-wire fence surrounding the park.

Currently, bison distribution is managed with a combination of hazing and removal. In 2000 the National Park and U.S. Forest services, Montana's Fish, Wildlife & Parks and Department of Livestock, other state and federal agencies, Indian tribes, and citizens developed a management plan. The

goal of the multi-agency management agreement is to reduce the risk of brucellosis transmission from bison to cattle by keeping the animals away from each other. Bison are allowed to exit the park into certain areas except in summer and early fall, when cattle are grazing on nearby Forest Service land.

In other areas, snowmobilers or horseback riders haze the bison back into the park. When hazing doesn't work, and the population exceeds the park's carrying capacity of 3,000 animals, bison leaving the park may be killed. The bison are captured and sent to slaughter or are shot by staff from the Montana Department of Livestock, FWP, or Yellowstone National Park. The meat and hides are then donated to Indian tribes.

Because the bison population has continued to grow, an average of 250 bison have been killed under the management plan each year since the winter of 2001-02.

### WHY NOT LET HUNTERS TAKE PART?

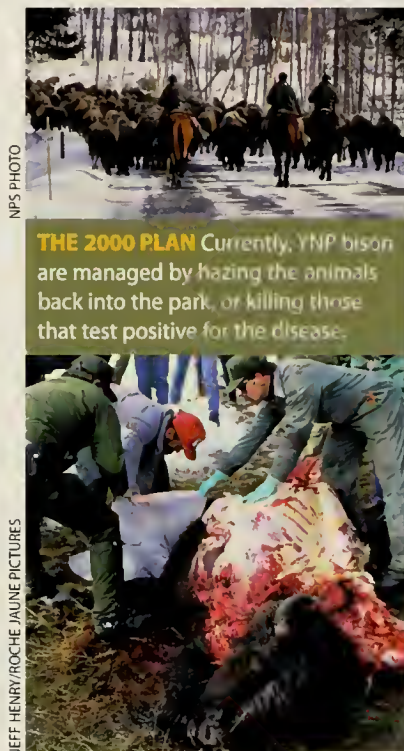
Some hunters and Montana lawmakers maintain that hunting could be used to help control bison numbers, as is done with other wildlife species.

"If we have to kill bison to avoid a massive winter die-off, which no one wants to see, then we ought to let hunters pay for the opportunity rather than pay state and federal agents to do it," says Montana Senator Gary Perry, who sponsored a bill passed in 2003 authorizing the FWP Commission to set a

public hunting season for the first time since the legislature banned the practice in 1991. "Hunting is a regulated management tool used for elk, deer, and other big game. There's no reason it can't be used for bison."

Except, say some, that bison are different. Though limited sport hunting was allowed on bison leaving the park as far back as 1953, hunts tried in recent years have been met with angry public protest. The worst fallout came in the winter of 1988-89, when Montana allowed hunters to shoot hundreds of bison exiting the park,

the largest buffalo hunt since the late 19th century. The Yellowstone fires the previous fall, along with deep snows and cold, forced a mass exodus of more than 3,000 bison from Yellowstone. Reporters from national TV news networks as well as publications such as the *New York Times* and the *Wall Street*



NPS PHOTO

JEFF HENRY/ROCHE JAUNE PICTURES

**THE 2000 PLAN** Currently, YNP bison are managed by hazing the animals back into the park, or killing those that test positive for the disease.

## COWED BY BRUCELLOSIS

Like mad cow disease, the fear of *brucellosis abortus* keeps ranchers awake at night. Nearly eradicated from domestic cattle herds at a cost of several billion dollars, the contagious disease can cause cows to abort. Brucellosis is now limited to wild elk and bison, particularly in the Greater Yellowstone Ecosystem. Montana livestock producers say the loss of brucellosis-free status would seriously damage the state's cattle industry. That's what happened to Wyoming, which lost its brucellosis-free

certification in early 2004 when two separate cattle herds near Grand Teton National Park tested positive for the disease.



*Journal* descended on the park to cover the spectacle of hunters lining up to shoot the emerging bison. "A Firing Squad for Buffalo: Montana-Style Hunting" read a *Newsweek* headline over the picture of a grinning hunter and his blood-drenched trophy. An article in *Time* referred to the hunt as a "public relations disaster." Protesters attacked hunters with ski poles, and TV cameras filmed hunters approaching to within 20 feet of bison before firing point blank at the grazing animals. Said one hunter quoted in *People*: "This is the most exciting hunt of my life!"

It was not hunting's finest hour.

"The big question for Montana is whether providing these relatively few bison hunting opportunities is worth the negative national publicity that's likely to occur," says Larry Peterman, FWP operations chief. "From a wildlife management standpoint, hunting makes sense, because the most realistic way to manage the growing population is to reduce the number of bison, and it shouldn't matter if it's sharpshooters, hunters, or slaugh-

terhouses. But from a social standpoint, hunting bison seems to be a huge deal."

The Humane Society of the United States, Buffalo Field Campaign, and other animal rights groups have begun marshalling forces to protest the hunts, which could be held this winter. That concerns

Ron Aasheim, chief of FWP's Conservation Education Division. He remembers how media coverage of the late 1980s bison season created a national backlash against hunters.

"We're not opposed to bison hunting, but hunters need to be aware that this could be used against them and have long-term implications for hunting in Montana and nationwide," Aasheim says.

But the new hunt, say supporters, will avoid the mistakes of previous ones. "It will be conducted just like those we

have for moose, sheep, and elk," says Perry. "It's right there in the law." Hunters won't be escorted to the bison as before, but will have to find and stalk the animals on foot away from roads. And resident and nonresident hunter numbers will be restricted to

promote "fair chase" standards maintained for other game animals. Hunt supporters also point out that bison hunts have been held for years without public protest on public herds in several provinces and states, including Yellowstone National Park bison venturing into Wyoming.

Bison hunting is allowed under the 2000 multi-agency management agreement. For the first year of Montana's new hunting season, the FWP Commission has authorized only a handful of licenses, though in future years numbers could be increased. Bison hunting limits will be regulated to maintain a healthy bison population of at least 3,000 animals in the park.

### A CHANCE FOR RESTORATION?

While wildlife managers, ranchers, hunters, and protesters keep a sharp eye on the bison in and around Yellowstone National Park, a new research project is under way to explore the possibility of expanding brucellosis-free bison beyond park boundaries.

"This agency and the people of Montana have an opportunity and an obligation to begin talking about where we go from here," says Chris Smith, FWP chief of staff. "Is it possible to move beyond the stalemate at Yellowstone and see disease-free, free-ranging herds of bison elsewhere in Montana and other Great Plains states and provinces?"

The task would be difficult. Of foremost concern is finding bison completely free of brucellosis that would pose no threat to the cattle industry. Currently FWP is working with the USDA Animal and Plant Health Inspection Service to study the feasibility of finding and isolating disease-free bison leaving Yellowstone National Park. The park's bison are among the continent's most genetically diverse.

The idea behind the \$4 million, two-year study is to strictly quarantine, for several years, Yellowstone bison calves that test negative for brucellosis. These animals and their young, if free of the disease, could then become the stock for restoration projects in other parts of the bison's historic range.

"What we're trying to do with this study," says Aune, "is determine whether it's possible to take bison from a diseased



**BUFFALO STAKES?** Protesters say bison hunts are unethical; hunters call it the thrill of a lifetime.



MONTANA FWP



herd, successfully screen and establish disease-free individuals, and capture their genetics to establish other herds to restore bison elsewhere in North America.”

According to Aune, the study has been supported and reviewed by federal livestock and animal disease agencies as well as the Montana Department of Livestock. And FWP and the USDA have been discussing the idea with many other state and federal agencies as well as private organizations, Canadian provinces, and Indian tribes.

“This may crack the door open into a new way of thinking about Yellowstone bison, one that focuses not just on containing infected bison in the park but on exporting disease-free bison out of the park to other selected sites,” Aune says.

Besides launching a restoration effort, the quarantine process could also help relieve pressure on Yellowstone’s burgeoning bison population.

“It could be another management tool for removing bison, but in this case the animals would remain alive and be put elsewhere,” Aune says.

Senior FWP officials note that much work still needs to be done before any

bison are transplanted to new sites. And Smith points out that “nothing will happen without further input from the livestock and farming community.”

But he also stresses that, with all the attention bison are getting lately, “this may be a great opportunity for Montanans to begin discussing how disease-free, free-ranging bison might be restored to select parts of their native range.” 🐾

**BEYOND YELLOWSTONE?** A new study is looking at the feasibility of quarantining disease-free YNP bison for transplant elsewhere in the U.S. and Canada. Sanctioned by federal livestock and disease agencies and the Montana Department of Livestock, the project takes bison calves that test negative for the disease and quarantines them outside the park. Those animals and their offspring, if they also test negative, could then become the genetic stock for restorations on parts of the bison’s historic home range. In addition, the quarantine–transplant program could become another management tool, along with hunting and other control measures, for relieving the pressure of too many bison in YNP.

SHAWN CUNNINGHAM



CHUCK KANEY

# THE SHEEP THAT WILL NOT DIE

BY BRETT FRENCH

**C**AN A SPECIES BE EXTINCT if it never existed? With the bicentennial of the Lewis and Clark Expedition now under way, Audubon's bighorn sheep are often mentioned as one of the now-extinct species the Corps of Discovery encountered on its trip up the Missouri River. "The Mandan Indians Call this sheep Ar-as-ta," Clark wrote on December 22, 1804, while camped in what is today central North Dakota. "It is about the size of a large Deer, or a small Elk, its Horns Come out and wind around the head like the horns of a Ram...."

But did expedition members actually see a unique sheep subspecies, or, as new research indicates, did they simply come across a variation of the widespread Rocky Mountain bighorn that, at the time, lived farther east than it does today?

## WHAT DID THEY ACTUALLY SEE?

There is no debate that bighorn sheep once existed farther east from their current range. Biologists believe the sheep likely settled in the northern Great Plains badlands over millennia by migrating from the Rocky Mountains down the Missouri and Yellowstone rivers, slowly expanding up tributary drainages. Lewis and Clark encountered their first bighorn sheep in eastern Montana, killing three in what is today the Upper Missouri River National Monument. A year later, on his return trip down the Yellowstone River, William Clark noted in his journal that the party saw "a gang of about 40 Big horn" sheep, and he killed four after inscribing his name in the sandstone of Pompeys Pillar.

While retracing the Lewis and Clark Expedition's route in 1843, noted naturalist John James Audubon hunted bighorn sheep in the badlands of North Dakota and wrote about his experience. In 1901, perhaps in honor of Audubon's observations, natural historian C. Hart Merriam scientifically classified the badlands sheep as a subspecies of Rocky Mountain bighorn (*Ovis canadensis*) and called them *Ovis canadensis auduboni*. The name gained even greater scientific credence in 1940, when the esteemed Canadian zoology professor Ian McTaggart-Cowan included the Audubon's as one of seven subspecies of bighorn sheep he defined in North America.

It took thousands of years for bighorn sheep to explore, claim, and settle the badlands, but the animals were removed from the region in less than 100 years. The westward expansion of land-hungry Americans and immigrants quickly displaced the bighorn sheep in eastern Montana and the western Dakotas and Nebraska. The sheep were hunted for food and, later, their elegant curled horns. Then, as sheepherders and cattlemen moved in, the bighorn's range was overtaken by livestock that carried diseases for which the native sheep had no immunity.

Though research done four years ago appears to show there never was an Audubon's bighorn, many people still cling to the notion that a now-extinct species once roamed the region.

Finally, cheap land offered to those who would settle and cultivate the ground brought a rush of farmers to the dry lands.

Squeezed by the pressures of western settlement and expansion, bighorn sheep living in the badlands died out. In his book *Lives of Game Animals*, published in 1929, naturalist Ernest Thompson Seton noted that bighorn sheep were "practically cleared out of the Black Hills by about 1887, though... a few lingered on till 1899 when the last one was killed." The last bighorn sheep seen in eastern Montana was a ram killed in 1916 in the Seven Blackfoot Creek area of the Missouri Breaks.

## QUESTIONING A CLASSIFICATION

For nearly a century after the Missouri Breaks ram was killed, biologists and others have lamented the disappearance of the so-called Audubon's bighorn. As one North Dakota state publication puts it, "Thus, the Audubon [sic] bighorn went the way of the passenger pigeon and Carolina parakeet."

And yet new evidence seems to show there never was a separate Audubon's bighorn subspecies. These great sheep of the Great Plains were simply Rocky Mountain bighorns that had adapted to life at lower elevations.

A species is a population with roughly the same size, color, behavior, and habitat that breeds with each other and can't breed with other groups. Members of the Canada goose species, for example, can't breed with those of other waterfowl species, such as the snow goose.

A subspecies is a race or group within a species that looks and is genetically different



CHARLES COTTRELL

**PASSENGER PIGEON WITH HORNS?** A mounted specimen identified as an Audubon's bighorn resides behind glass in the science building at Montana State University–Northern in Havre. However, new research indicates this specimen is likely a regular Rocky Mountain bighorn.

from other members of the species but can still breed with them. For example, there are several subspecies of Canada geese that differ mainly in size. And scientists have concluded that the Rocky Mountain bighorn and the desert bighorn are different subspecies.

The big question is whether what has been called the Audubon's bighorn sheep differed enough from ordinary Rocky Mountain bighorns to be considered a subspecies.

Biologists don't dispute that the badlands bighorns may have looked slightly different from their mountainous cousins. But those minor differences weren't enough for population research scientists John Wehausen and Rob Ramey. In a study published in *Journal of Mammalogy* in 2000, they wrote, "Our results did not support the recognition of Audubon's bighorn sheep as a subspecies separate from Rocky Mountain bighorn

sheep...." The scientists noted that Cowan's classification of the Audubon's 60 years earlier was based on examination of just four bighorn skulls, and they took issue with the fact that the "type specimen" was not an adult ram but a juvenile. "The resolution and results were influenced by small samples, age-related effects on size, and violation of statistical assumptions," they wrote. "As a result, statistical re-analysis of Cowan's

(1940) original data has not found support for most of his subspecific designations."

Taxonomy in the early 20th century was fraught with subjective interpretations of limited information. "In traditional taxonomy, species and subspecies were what a good taxonomist said they were," says Ramey, chair and curator of vertebrate zoology at the Denver Museum of Nature and Science.

For their study, Ramey and Wehausen were able to find seven alleged Audubon's specimens—two adult male bighorn skulls from North Dakota, two from South Dakota, and three from eastern Montana. They used 50 measurements to describe four skull attributes: lengths, widths, height, and horns, and then measured each horn using five circumferences to determine volume. The researchers found "no significant differences" between those skulls and those of ordinary Rocky Mountain bighorn sheep.

"It's really not a very surprising result," says Wehausen, a scientist at the University of California White Mountain Research Station. "We're just correcting some questionable work from earlier days. Now we have more rigorous hypothesis testing."

Modern scientists also point out that no reasonable evolutionary explanation exists to explain a distinct subspecies of bighorn sheep. The badlands sheep were never geographically separated from the Rocky Mountain bighorn sheep. Biologists say a newly formed natural barrier would have been necessary to isolate the badlands bighorns so they would develop distinct, unique characteristics.

## OLD MYTHS DIE HARD

Because the idea of an Audubon's subspecies has been promulgated for more than a century, it has become entrenched in western mythology. "People just eat this stuff up and keep repeating it," Wehausen says about the romantic notion of a "lost" species. He adds that much incorrect information circulating about bighorn sheep doesn't stand up under scrutiny. "It's frustrating for people like us, who try to set the record straight, that the information is being ignored."

In 2003, three years after Wehausen's

*Brett French is a writer who lives in Billings.*

**"We had naturalists running all over the place trying to name new animals. At one time, they actually thought there were 20 different subspecies of black bear."**

—BILL JENSEN, BIG GAME BIOLOGIST,  
NORTH DAKOTA GAME AND FISH DEPARTMENT

and Ramey's study was published, the National Bighorn Sheep Interpretive Center in Dubois, Wyoming, exhibited an aging bighorn sheep mount labeled as the extinct Audubon's bighorn subspecies. The mount was on loan from South Dakota's Custer State Park, which labeled it as an "endemic subspecies to the badlands and Dakotas."

June Sampson, director of the Wyoming bighorn sheep center, justifies the Audubon's label by noting that Ramey's and Wehausen's technical study can be difficult for the lay person to understand. The center included a footnote in its information on the mount that the two scientists concluded there never was a separate subspecies. "We let visitors decide for themselves from there," Sampson says.

The Dakotas and Nebraska have been especially keen on recounting the past glory of Audubon's bighorn. The subspecies is mentioned on the websites of all three states' conservation agencies. North Dakota, however, has recently begun to publicly question the validity of the subspecies, says Ron Wilson, editor of *North Dakota Outdoors*. "There is growing recognition here that the Audubon's designation is based on some pretty shaky science," he says.

Bill Jensen, a big game biologist with the North Dakota Game and Fish Department, has collected bighorn skulls and skull measurements since the mid-1980s, when he first grew suspicious that there was no separate subspecies.

"This all stems back to an era when a naturalist gained fame by naming new species and subspecies," Jensen says. "We had naturalists running all over the place trying to name new animals. At one time, they actually thought there were 20 different subspecies of black bear."

Montanans aren't immune to the Audubon's bighorn mystique. Full mounts of what are called Audubon's bighorn sheep can also be found in Havre at the Montana State University–Northern's science building and in Miles City's Montana Bar.

## SYMBOL OF PARADISE LOST?

Michael Sexson, a professor of mythology at Montana State University, says no matter what the facts are, the myth of Audubon's bighorn will likely survive.

"Some people would prefer to believe in things more interesting than the facts allow them to be," he says. "We like to have our stories as stories."

Sexson says the sheep play an important role in the story of Lewis and Clark's journey across the West, an epic adventure that has become part of American mythology. The two heroic characters overcame enormous odds to voyage from the mouth of the Missouri River to the Pacific Ocean and back. It's a tale of bravery, perseverance, and faith. Yet, like other heroic myths, the Lewis and Clark adventure has its dark side.

"As the adventurer in traditional mythology forges ahead to a new civilization, he typically wreaks havoc on the land and leaves carnage in his wake," Sexson says. In the case of the Lewis and Clark saga, the unspoiled paradise discovered by the Corps of Discovery was degraded in the subsequent scramble for precious metals, timber, grazing lands, and farmland. Hence, the mythologist explains, within the larger myth of the Lewis and Clark Expedition, Audubon's bighorn emerges as a corollary myth of how westward exploration and eventual expansion led to the demise of the badlands bighorn sheep.

Seen in this way, Audubon's bighorn symbolizes both abundance and loss. It stands for the great natural wealth America possessed when the West was young, an Eden of bountiful forests and wildlife where native people lived harmoniously with their natural surroundings. But it can also represent how Americans exploited the nation's finite natural resources in their quest for higher living standards.

Because both views of western expansion are widely popular, Audubon's bighorn will likely live on—even though, as some now say, it never even existed. 🐻

# Some Things To Do

By Tom Dickson

WHEN 12-YEAR-OLD Reeves Belk learned he had less than two months to live, he didn't cry or even complain. He made plans.

"He told us, 'I may be dying, but I've got some things to do,'" says his mother, Laurieanne Belk, a high school counselor.

One of Reeves's goals was to hunt mule deer in Montana. Thanks to the efforts of many people, especially the undaunted young hunter himself, Reeves got his wish.

The Belks, of Brandon, Mississippi, were stunned to learn on June 26, 2003, that their youngest child had malignant and peripheral nerve sheath tumors. "He was the healthiest boy you could imagine," says his mother. "He was a runner, he played soccer, he played baseball. He hunted and fished. He was always going. Then one day he came to me and said, 'Mom, there's something wrong with my head.'"

It turned out a rare cancer had formed on Reeves's spinal column and was blocking fluid from reaching his brain. The doctors learned it was growing fast. Preparing the family for the worst, they told the Belks their son would likely die by summer's end.

What a child must think when learning of such impending tragedy is unimaginable. Yet Reeves's response to the grim news was equally so. "First thing, he wanted to catch more bass," says his mother. "Then he made a list of all the other things he wanted to do before he died: Go to an Atlanta Braves game, see one more Ol' Miss game, shoot one more deer. He didn't want to go to any amusement parks or things like that. He was an outdoors boy. He wanted to do things like hunting. And then we learned about Catch A Dream."

Meanwhile, Russ Greenwood was also learning about the nonprofit Catch A Dream, established in Mississippi in 2000 to grant exceptional hunting or fishing trips to kids with life-threatening illnesses. Greenwood, a hunting outfitter in Broadus, Montana, saw the organization advertised

in a sporting goods catalog.

"I thought there might be a child out there who would want to hunt here," he says.

Things moved fast after that. In July, Catch A Dream put the Belks in touch with Greenwood, who offered to donate a mule deer hunting trip. Then the organization purchased a hunting license for Reeves and arranged airfare and transport for him, his parents, and his older brother and sister. A friend of Greenwood's who worked for Delta Airlines donated airfare passes for the family. In October, the Belks headed to Montana. "That's when the dream began," says Laurieanne.

The family arrived in Broadus, in Montana's southeastern corner. By this time, Reeves had outlived the medical experts' predictions, but it was obvious the boy was dying. His weight had dropped from 80 pounds to just 40 pounds. "He was so weak he couldn't get out of his wheelchair and stand for long periods," his mother says. "When they went hunting, Daddy had to carry him around on his back."



Reeves Belk, his father, James, and guide Russ Greenwood scouting for mule deer near Broadus.

The Belks and Greenwood hunted hard, trying to get the boy close to a buck. Reeves had shot several deer in his home state, where youngsters of any age can hunt big game with their parents, so he was an experienced shooter. But on the first two days of his Montana hunt, he had to pass up several shots, unable to get the rifle up in time or hold it steady. He was physically taxed, his mother says, though thrilled to be out West, stalking big game like he'd read about in hunting magazines. "He wouldn't stop talking the whole time," she says. "He'd be chattering away about the range of the rifle or the land or the deer or pretty much everything. He was just so happy to be hunting."

On the third morning, Greenwood left early with Reeves and the boy's father, James. A few hours later they returned, earlier than expected. Laurieanne heard the pickup pull up to the cabin. "I thought, Oh no, something bad has happened." She stepped outside and saw her son in the truck. "He had the biggest smile you ever saw," she says.

Reeves had shot his mule deer, a large six-by-five buck. While the young hunter, his family, and Greenwood celebrated over lunch, a local taxidermist arrived and whisked the deer off to mount the head and tan the hide. Greenwood says the Montana Game Wardens Association paid for the work as well as to ship the trophy to Mississippi. Laurieanne says the family was thrilled when, just three weeks after they returned home, Reeves's mount arrived in a crate on their front stoop (such taxidermy usually takes six months or more). "We put it up in his room, and he looked at it every single day," she says.

Reeves died on April 30, 2004, just one month after his 13th birthday. More than 1,500 people showed up at the "going away celebration" he had asked for instead of a funeral service. During the last two weeks of March, his mother says, Reeves and his father, a middle school principal, fished for bass almost every day.

"The memory of those 11 months is so bittersweet," says Laurieanne. "Even with all the sadness, it was so beautiful watching how Reeves handled it, how he never complained but instead focused on all the things he wanted to do before he died." 🐾

Tom Dickson is editor of Montana Outdoors.

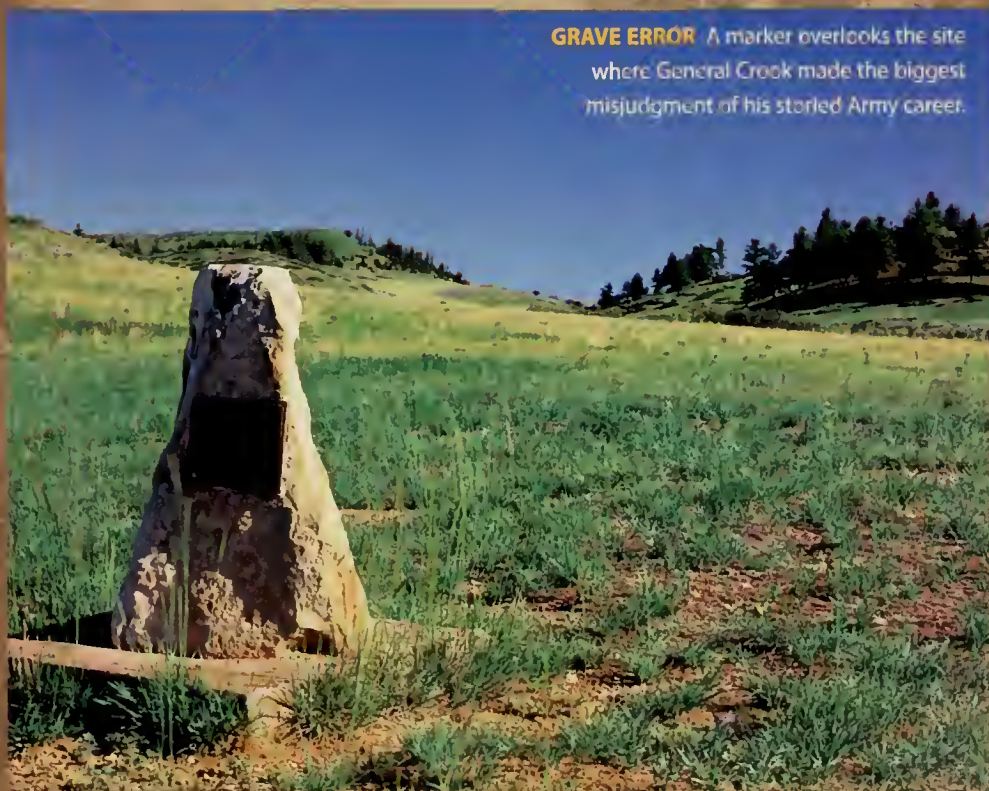
# A BIG PRELUDE ★ TO THE LITTLE BIGHORN



THE SIOUX CHARGING COLONEL ROYALL'S DETACHMENT OF CAVALRY, ILLUSTRATION BY CHARLES ST. G. STANLEY,  
IN FRANK LESLIE'S ILLUSTRATED NEWSPAPER, AUGUST 12, 1876. DENVER PUBLIC LIBRARY, WESTERN HISTORY COLLECTION



**ROSEBUD BATTLEFIELD STATE PARK** preserves the pivotal battle grounds where, on June 17, 1876, the balance of power between the Army and the Indians shifted, leading to Lieutenant Colonel George Armstrong Custer's legendary defeat. **By NEIL MANGUM**



**GRAVE ERROR** A marker overlooks the site where General Crook made the biggest misjudgment of his storied Army career.

**T**HE PATH TO CROOK'S Hill follows an abandoned ranch road choked by swaying prairie grasses floating in the early morning dew. At the summit of this historic landmark in Rosebud Battlefield State Park, a visitor is rewarded with sweeping views of rock-strewn ridges, the snowcapped peaks of the Bighorn Mountains, and undulating prairie colored with splashes of wildflowers. The quiet and serenity of the site, however, belie its violent history. For here, 128 years ago, was fought one of the most intense battles ever waged between Native Americans, desperately trying to retain their lands and culture, and the soldiers of the U.S. Army, enforcing an edict from Washington, D.C.

Rosebud Battlefield is not a park of picnic tables and playgrounds. Few structures disturb the nearly pristine landscape. There is no visitor center, only a former ranch house that serves as a ranger's quarters. A cluster of interpretive panels at the park's entrance is the only indicator that this pastoral setting was once a battlefield. The site looks remarkably similar today to how it did more than a century ago, when Brigadier General George Crook's command was met in battle by Sioux and Cheyenne warriors. The battle fought here in mid-summer 1876 is considered by many historians as one of the most important Indian War battles of the American West. Still studied by military strategists, the confrontation was a strategic win for the Indians that led, a short time later, to an even greater victory at the Little Bighorn.

## ★ FORCE THEM TO SUBMIT

On the morning of June 17, 1876, more than 1,300 soldiers, miners, and Crow and Shoshone Indian scouts, led by Brigadier General George Crook, paused along Rosebud Creek. The north-flowing tributary of the Yellowstone River flows from the Wolf Mountains in what is now southeastern Montana. Having arrived the previous morning from present-day Sheridan, Wyoming, Crook's men lined up for nearly a

mile along both sides of the sluggish, 30-foot-wide stream. Crook's mission was to find the Sioux and Cheyenne village he firmly believed was nearby, destroy it, and force the tribes to submit to reservation confinement.

The Indians had no intention of reporting to the reservations. Under the spiritual guidance of Chief Sitting Bull and war leaders Crazy Horse and Spotted Wolf, the Indians were steadfast in their determination to resist encroachment on their historic hunting grounds. The Treaty of 1868 acknowledged that the Indians owned roughly 125,000 square miles of land in today's western South Dakota, eastern Wyoming, and southeastern Montana. And the U.S. government had promised protection "against the commission of all depredations by people of the United States."

But peace remained fleeting. The discovery of gold in the Black Hills flooded the region with miners and settlers who disregarded Indian rights. The government first tried to evict the miners and then purchase the Black Hills from the Indians, but both efforts failed. Finally, it issued an edict to the Indians living in the unceded lands to accept reservation life by the end of January 1876 or "face military action." When Sitting Bull and other Sioux and Cheyenne ignored the ultimatum, it became the Army's responsibility to enforce the decree.

In spring of 1876, the Army ordered columns of soldiers from three different directions to trap the Indians. General Crook, considered the Army's greatest Indian fighter, led the third and largest contingent from Fort Fetterman, Wyoming Territory.



Brigadier General Crook, considered the U.S. Army's greatest Indian fighter, was assigned to lead a column as part of a three-pronged force aimed at driving Sitting Bull, Crazy Horse, and their followers back onto the reservations. But the Indians held firm. At Rosebud Creek, General Crook's force of 1,300 soldiers, miners, and Crow and Shoshone scouts fought roughly 1,000 Cheyenne and Sioux in a six-hour-long battle still studied by war strategists today.

KEVIN BROOKE

Crook's column departed Fort Fetterman on May 29. On June 14 the column was joined by 276 Crow and Shoshone, bitter enemies of the Sioux and Cheyenne. The Crow, among them Chief Plenty Coups, informed Crook that Sitting Bull's village was nearby, on Rosebud Creek. They were wrong. Sitting Bull and his followers were no longer on the Rosebud, having moved westward to a tributary of the Little Bighorn River, roughly 60 miles from Crook. The camp's estimated 7,000 people, including 1,500 to 2,000 warriors, made it one of the largest concentrations of Indians ever to assemble on the northern Plains.

Acting on the Crow and Shoshone Indian scouts' advice, Crook marched on June 16 to the headwaters of the Rosebud. That day, Crow scouts far ahead of the column sparred and exchanged insults with a small party of Cheyenne. The Cheyenne returned to their main camp and alerted Sitting Bull and the councilmen that soldiers were coming. The Indian leaders decided to send warriors to intercept the bluecoats before

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Rosebud Battlefield State Park (left and above) is the site of a historic 1876 battle filled with heroic acts. One of the most famous was the rescue of Limpy, a Cheyenne warrior (below right). As the Cheyenne and Sioux chased Colonel Royall's troops, a soldier shot Limpy's horse from beneath him. With bullets whizzing past, the warrior got in a rocky outcropping, climbed atop a large boulder, then leapt onto the passing horse ridden by Young Two Moon (nephew of the great Cheyenne warrior Two Moon). The two then galloped off to safety.



JEFF ERICSON  
GENERAL CROOK AND LIMPY COURTESY OF THE LITTLE BIGHORN BATTLEFIELD NATIONAL MONUMENT

they could endanger the village. An estimated 1,000 men under the guidance of Crazy Horse departed for the Rosebud.

The next morning, Crook advanced 5 miles along Rosebud Creek. The men unsaddled their horses and began to boil coffee and rest while their Crow and Shoshone scouts probed northward. Barely one-half hour elapsed before rifle fire from the north interrupted the stillness. Galloping down from the hills to the camp rode the scouts, closely pursued by Crazy Horse's warriors. The scouts halted along the bluffs above the creek and fought the Sioux and Cheyenne for a critical 20 minutes, giving the startled Crook time to recover from the surprise attack.

The general knew at once his position in the creek bottom was vulnerable. Quickly forming his cavalry and infantry, he decided to push the warriors off the high ground. He sent Captain Anson Mills and his battalion of the 3rd Cavalry straight at the Sioux and Cheyenne, driving them back. The historic battle had begun.

## WHERE THE GIRL ★ SAVED HER BROTHER

In a gap at the eastern end of a ridge, the fighting intensified as the retreating Indians turned and charged the soldiers. That ridge gap was the site of a heroic act still legendary among the Cheyenne. The advancing soldiers killed the horse ridden by a Cheyenne chief known as Comes-In-Sight. Too far away to assist, Crazy Horse and his followers could only watch helplessly as the soldiers advanced toward their fallen comrade. Suddenly an Indian rider charged down into the gap, mindless of the bullets throwing up clouds of dirt around the horse's hooves. Zigzagging to avoid being shot, the rider reached Comes-In-Sight and beckoned him to leap aboard and ride to safety. The rescuer turned out to be the warrior's sister, Buffalo Calf Road Woman. To this day, the Cheyenne proudly refer to the Rosebud fight as the battle Where the Girl Saved Her Brother.

Buffalo Calf Road Woman wasn't the

only skilled rider that day. Mills, describing the fighting at the gap, later wrote: "The Indians proved then and there that they were the best cavalry on earth. In charging up towards us, they exposed little of their persons, hanging on with one arm around the neck and one leg over the horse, firing and lancing from underneath the horses' necks, so that there was no part on the Indian at which we would aim."

Once Crook retook the high ground, he established his command post on the long ridge known today as Crook's Hill. Roughly one-third of a mile to the west, the warriors positioned themselves on a rise now known as Conical Hill. For the next several hours, the battle ebbed and flowed as Indians and soldiers advanced and then retreated back to their strongholds. Midway between the soldiers and the warriors, on a rocky outcropping, were 60 miners who had joined Crook's column for "sport." Their sharpshooting skills helped blunt any major Indian foray toward Crook's Hill.

While Crook and Mills were holding the

Indians off, Colonel William B. Royall was struggling to rejoin his commander. Roughly a mile to the west of where Crook's main forces were fighting Crazy Horse and most of his warriors, Royall's 225 men were defending a ridge, huddled under a protective slope besieged by more than 400 Indians. When Crook sent orders for Royall to rejoin the command, the colonel abandoned the ridge but soon was pinned along another ridge by the pursuing warriors. After an hour of fighting, Royall retreated again, and again was forced to

make a stand, this time at Kollmar Creek, below Crook's position.

During Royall's retreat from his second to third position came another famous act of bravery. While chasing the soldiers, a disabled Cheyenne named Limpy had his horse shot from beneath him. Unable to run, the Indian posed an easy target, and the soldiers unleashed a fusillade of carbine rounds in his direction. Seeing Limpy's plight, Young Two Moon (nephew of the great Cheyenne warrior Two Moon) ran the gauntlet of lead to rescue his fellow tribes-

man. Limpy reached a rocky outcropping, climbed a boulder, then leapt onto the rear of Young Two Moon's passing steed, which carried the two warriors to safety.

Frustrated by the Indians' guerrilla-style tactics, Crook decided to force the issue. Still convinced that a village lay on the Rosebud, he sent Mills and half the cavalry with instructions to proceed down the Rosebud, find the camp, and hold it until Crook could follow with the rest of the command. Believing the exodus of Mills's cavalrymen indicated a retreat, the Indians intensified their attack on the beleaguered Royall in some of the fiercest fighting of the battle. Five soldiers were killed there and at least ten were wounded. Finally Crook sent two companies of infantry down to provide cover for Royall and his men, who retreated up the hill to the general's fortification.

Sensing further disaster, Crook reluctantly dispatched a messenger to Mills, now searching the Rosebud valley for the phantom village, urging him to return immediately. The captain and his men returned by swinging in behind Conical Hill, forcing the Indians to retire from the site, thus ending the battle.

Though tired and hungry, Crazy Horse and his warriors were proud of their effort. They had taken the fight to Crook, stopped the bluecoats in their tracks, and earned many war honors. More importantly, Sitting Bull's village remained unharmed.

Despite the ferocity of the six-hour battle among roughly 2,500 combatants, General Crook reported only 10 men killed and 21 wounded. Cheyenne and Sioux losses were estimated to be slightly higher, though still relatively light considering the magnitude of the conflict.

Crook claimed victory based on the argument that he held the ground. But military strategists later judged the claim an empty boast. Though tactically the battle was a draw, it turned out to be a strategic victory for the Indians. Crook's was the largest of the three prongs sent by the Army to force the Indians back to the reservations, and the Rosebud Battle knocked him out of the campaign. After withdrawing to his supply base on Goose Creek, Wyoming Territory, Crook and his men rested for six weeks. By the time they recovered, they were too late

## WHERE THE GIRL SAVED HER BROTHER



SOURCE: Custer Battlefield Historical and Museum Association

While camped at Rosebud Creek, General Crook mistakenly believed he was near Sitting Bull's village, which was actually 60 miles away. On June 16, having heard of the Army's approach, Sitting Bull sent 1,000 warriors under the leadership of Crazy Horse to intercept the bluecoats. The next morning, Crazy Horse's warriors descended on Crook's camp (1). The general first sent a battalion under Captain Anson Mills charging into the warriors on a ridge (2). At a gap (3) in the ridge, Buffalo Calf Road Woman saved her brother, Comes-In-Sight, in an act of heroism still celebrated by the Cheyenne. The Army set up its command post at Crook's Hill (4). Several hundred yards to the west, the Indians positioned themselves on Conical Hill (5), from which they made assaults on Crook's position. Colonel Royall's hapless effort to reunite with Crook began at a ridge (6) far to the west, which he abandoned only to be pinned by Indians along another ridge (7). Near this point was where the Cheyenne Limpy had his horse shot from under him (8) but was able to leap onto the horse ridden by a brave warrior who came to his rescue. A short while later, Royall retreated to his third position (9), at Kollmar Creek below Crook's Hill, and Crook sent Mills down Rosebud Creek (10) to find Sitting Bull's village, which he still did not know was far to the west. The battle ended only when Crook sent for Mills to return and the captain came in behind the Indians at Conical Hill, forcing the warriors to retire from the site.



A granite obelisk marks Crook's Hill, where the general fended off Sioux and Cheyenne warriors for several hours. "The Indians proved then and there that they were the best cavalry on earth," wrote one captain.

to help prevent the Army's greatest defeat in the Indian Wars.

The success at Rosebud had strengthened the resolve of the Cheyenne and Sioux. It bolstered their determination to fight for freedom and convinced them they could, in sufficient numbers, fight the soldiers and win. That attitude prevailed eight days after Rosebud when the warriors achieved their largest triumph ever—the stunning annihilation of Lieutenant Colonel George A. Custer's immediate command at the Battle of the Little Bighorn. 🐾

## ★ IF YOU GO

**Open:** All year.

**Location:** Roughly 90 miles southeast of Billings, near the Tongue River Reservoir. Public access to the park is off Bighorn County Route 314 via a privately owned road that parallels Rosebud Creek.

**Amenities:** This is a primitive park containing only a toilet, site map, and several concrete pyramidal markers denoting key sites on the battlefield.

**Features:** Homestead-era site, historic battlefield site, buffalo jump dating back to 3000 B.C., petroglyphs (in sandstone walls below the jump), tipi rings, eagle-catching pits, and rock cairns. Northern Cheyenne from nearby Lamie Deer view Rosebud as sacred ground and hold ceremonies at the site honoring the warriors and the soldiers who fought and died there.

During the hunting season, the park is open to antelope, deer, and upland game bird hunting. Ranchers lease parts of the park to graze cattle. The required rotation grazing maintains native plant species and wildlife habitat diversity.



## ROSEBUD BATTLEFIELD STATE PARK



Ancient petroglyphs and a 5,000-year-old historic buffalo jump near the battlefield site could be threatened by coal bed methane development.

GARY LEPPART

## A New Battle Ahead?

When Rosebud Battlefield was established as a Montana state park in 1978, it fulfilled a 40-year-long dream of rancher Elmer E. "Slim" Kobold to protect this significant site. Today, that dream could be threatened by the prospect of coal bed methane development.

Kobold, originally from Oklahoma, homesteaded the historic battlefield and surrounding hills, bluffs, and grasslands in 1911. Over the years, he became fascinated with his property's rich history and worked to preserve and protect the significant battlefield and Indian artifacts.

In addition to battle sites, rock cairns, petrified stumps, and tipi rings, the area contains a buffalo jump. Located near the park's entrance, the jump's use dates to 3000 B.C. Archaeologists believe it had one of the highest densities of prehistoric cultural habitation of any buffalo jump in Montana.

The park has other values. For decades, U.S. military scholars have visited Rosebud to study the battle strategy used by both sides. And Native Americans, particularly the Northern Cheyenne, revere the area, performing ceremonies and making offerings to their forebears.

Kobold understood that these and other values made the battlefield worth protecting. When mining companies found a rich coal seam under Kobold's property in the early 1970s, he began an intense letter-writing campaign and teamed up with FWP to get Rosebud



In this aerial photo, coal bed methane development in Wyoming covers the landscape in roads, pipelines, and wastewater reservoirs.

Battlefield designated in the National Register of Historic Places. A few years later, with constant urging by the tough old cowboy, the Montana legislature agreed to preserve the site, appropriating money from the Coal Tax Fund to acquire a large portion of the battlefield.

Now a new type of development threatens to disrupt the historic site. Because FWP only owns the surface rights of the property, the battlefield could be developed for coal bed methane by private interests who own or lease mineral rights. Trucks, generators, compressor stations, pipelines, roads, noise, wastewater, and dust could envelop the historic battlefield.

Recently, FWP has been working to protect the historic battlefield and archaeological sites by meeting with various organizations such as the National Park Service, the Montana Preservation Alliance, and the mineral rights lessee.

—Bob Peterson, Manager, Rosebud Battlefield State Park



# MOUNTAIN MALLARDS

A PLAIN DISCOURSE ON DUCK SHOOTING IN THE ROCKIES

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ESSAY AND ART BY RUSSELL CHATHAM



WINTER, YELLOWSTONE RIVER SUITE

**T**he official opening of duck season always seems inappropriately early. This is especially true in the northern Rockies, where the first week in October is usually warmed by Indian summer. It isn't out of place, then, to look forward to a rather personal opening day, which may not arrive until the first of November.

If you're somewhat indecisive anyway, and anything less than a fanatic about duck shooting, October offers plenty of other field sports to divert your attention: upland bird hunting for pheasants and five species of grouse. And in the late fall, trout fishing, the best of the year.

It's hard to predict when the first real cold will hit the Canadian prairies, freezing potholes and putting birds in the air in long, uneven strings aimed south. It doesn't happen all at once. Ducks, in common with other migratory creatures, sometimes move for reasons not easily detected or understood. There will come a day, for instance, when I step outdoors in Livingston and sense fall in the air. Ordinarily this will be in late August and I won't be able to explain precisely what it is I feel, but it is there. Animals must surely feel these pivotal changes with a good deal more clarity than I do. Ducks, in their thoughtless serving of ancient instinct, simply blast up out of the pond, climb to 3,000 feet and hold at a steady 40 miles an

hour, following the bright ribbons of rivers far below.

Let's say this personal opening day starts in the afternoon, because I haven't gotten up early enough to organize a dawn hunt. It is snowing intermittently, with the wind gusting out of the north. The general deer and elk seasons have just opened, thus diverting hunting pressure; it seems a perfect time to privately open the waterfowl season, which has been open to everyone else for several weeks.

The initial hunt involves walking around a tract of land of perhaps 50 acres, laced with potholes, ditches, and a small, winding spring creek. There are bound to be some mistakes. One happens immediately when four mallards jump out of the stream near the car, well before I've loaded the gun. I tense, imagining that this late and futile gesture will prevent it from happening again.

The first spot that normally holds a few ducks is a tiny spring at the head of a slough, hidden well in the cottonwoods and rich with watercress. I calculate a wrong turn and end up in a wild-rosebush thicket, staring at a confused cottontail. I back out, go way around, and come to the spring as if by surprise. There are no ducks. While I stare blankly at the water as if something might crawl out from beneath the 'cress, two mallards that have been sitting off to the side jump and squawk, keeping a cottonwood between us as they climb out fast.

**T**he next stop is an open pond, with some good cover for a sneak. I peer carefully through the trees and underbrush and see about a dozen birds on the water. At a distance they are at first hard to identify; closer they top up, scoot around, and distinguish themselves as green-winged teal. It's necessary to crawl the last little way to get within range. Once there, I look cautiously through the chokecherry and see the birds well bunched up. I stand abruptly to make them fly; the ducks blast straight up, then flare away, catching the wind. I manage to isolate one on the rise, elevate above it and drop it cleanly. It is the only one.

I walk along the creek, alternating in and out of cottonwoods and pines. It's too windy to be able to hear ducks talking, but beyond the trees an occasional single or double cir-

From the collection of essays, *Dark Waters*.

by Russell Chatham. Copyright 1991.

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# DUCKS,

in their thoughtless serving of ancient instinct, simply blast up out of the pond, climb to 3,000 feet and hold at a steady 40 miles an hour, following the bright ribbons of rivers far below.

cles, looking for a resting place. At the edge of a clearing I stop and watch. Most of the birds are very distant, coming into sight above the dark mountains. One comes beating straight toward me. There is little time to decide whether he is within range or in the foolishness zone. I opt for the former and swing up behind the fast-moving bird, which pulls way out in front by 10, maybe 12, feet. It is a long, sweeping grandstand play, the kind I hope works in spite of everything. Luck has it and the dead drake mallard soars a hundred yards into the creek.

The next two holes are empty, so I make the circle back to the car. There is perhaps an hour-and-a-half of shooting time left and I want to set out some decoys on a pond about a mile away. There is no real way of approaching the pond under cover, and the bunch of mallards floating on it flare. They circle once, wanting to drop back in, but I'm too far from the underbrush to run for it, so I crouch like a lum-mox with my bag of decoys. The ducks wing on up the valley.

**S**ix or seven decoys are enough, partly because more than that are hard to carry, and partly because on these little creeks and ponds using more than a dozen is pointless. There are no massive flights here, as along the major flyways. I've seen singles, doubles or sometimes small flocks of eight, ten, or twelve birds looking for a place to drop in and rest.

In the wind the decoys sit taut at the end

of their tethers, swaying slowly back and forth. The blind is a space in the choke-cherry bushes about 20 yards from the pond. Theoretically, birds should be taken at the ideal distance of 20 to 30 yards, as they set to come in, pass over for a look-within range, or flare up and away.

The first two ducks to come over don't realize this. The loud whistle of their wings is heard only seconds before they fly directly overhead from behind, getting out of range at once. The next bird follows the script more closely. A drake mallard drops in, wings set and wavering, like a high looping softball pitch coming to the plate. I stand, let him start to flare, and drop him into the decoys.

The next bunch is more interesting. First seen at a distance, they circle widely, staying in sight. When they come over for a look I attempt a high-ball call which comes out sounding more like Zoot Sims than I had hoped. They seem not to have heard from upwind because they veer, pick up speed and begin losing altitude. Ordinarily mallards are not this forgiving when hooted at inately. I tuck the call away, thank God for small favors, and resolve in the future to stick to the more innocuous feeding gabble. When ducks come in like this they are nearly always traveling faster than is apparent. Or else their angle of descent is deceiving, because I poke two neat holes in the sky while the ducks move on unruffled, if not entirely unnerved.

It is nearing the end of shooting time. Mallards move well at twilight hour and this evening is no exception. Birds begin coming in with regularity against the wind. There are the always-mysterious misses, and finally, two more mallards go down to

make a limit. As I go out to pick up the decoys, a distant sound is borne in on the wind, one which takes some moments to register. It always sounds a bit like dogs barking far away or people talking in the next room. Even when I know full well what it is there can be a recognition lapse.

A line of Canada geese is coming in unseen below the cottonwoods. Ten seconds, twenty seconds, and then I see them against the sky and know at once they must pass directly overhead. They are within shooting range and I huddle under the decoy sack, afraid to move. Geese within range always look far too big, like the letters in a first-grade reader. I'm not specifically hunting for them and don't get that many chances to see them in range. Overhead their talking is very loud, the wing beats clearly audible. The trick with geese is to lead the head and not the body, and to remember, again, that they appear to be moving slower than they really are.

I have plenty of time to think about these things before it's time to raise up. I take the lead bird before it is upon me and hear the shot hit. It wavers but doesn't fall. The second shot is when it is right overhead, and the goose collapses, hitting the ground with a terrible thud. Opening day is over and I couldn't have diagrammed a better one.

**I** never really get used to seeing ducks high in the northern Rockies. The first glimpse of them strung out above a jagged rimrock of the Absaroka Range reminds me of the strange gargoyles in the *Wizard of Oz* that come down from the witch's castle to attack Dorothy and friends. The birds find sanctuary in this harsh land-

*Russell Chatham is an artist, author, publisher, and owner of the Livingston Bar & Grille in Livingston.*



scape down in the river valleys and in spring creeks and ponds. Such relief is relatively scarce compared with the vast expanses of open, dry prairie and sharp, high peaks, and the birds must naturally follow a course which keeps them in view of places to feed and rest....

**D**ucks begin to appear about the first of October after the early storms sweep across Canada. After that, sportsmen start thinking about putting the trout tackle away, buying ammunition, and making appointments with the service station to have their cars winterized.

I sometimes arm myself as a hyphenate, putting the shotgun over my left shoulder and the fly rod over my right. Usually I end up with neither ducks nor trout. There I am, waiting in the blind for an hour with nothing going over, watching a trout rising just past the decoys. I give in and step forward with the fly rod, and moments after putting down the trout with a nervous, clumsy cast, two dozen mallards flare away in panic as I foolishly rush back to the blind.

Finally, Indian summer breaks and the cold sets in for good. Trout fishing is still a possibility, but one's attention turns more firmly to ducks and geese, which show in more impressive numbers. A good duck day now will not be confused with a good trout day. Of course, a big game hunter might want to torment himself with that particular conflict, but that's another story....

Good duck hunters must be jealous of the places they shoot. The reasons seem obvious enough. The birds should be able to work in a natural pattern, undisturbed.

It is after all rather a game, and I want to be able to call the birds and pick my shots according to my own temperament and not someone else's.

The best way to hunt mallards, or more accurately, the most interesting way, is to blend jump and decoy shooting. Mallards move best at dawn and dusk, and in between I can usually work out some sort of walk by which to jump them out of ponds, potholes, or ditches. I can do this after an early morning decoy shoot, or in the afternoon before setting the decoys out for the evening flight. Pass shooting—walking the river and taking the luck of the draw, as it were—is usually the hardest way of filling a limit....

Once there is snow on the ground, the matter of visiting favorite duck water incognito is vastly simplified by use of the Sheet Ploy. A simple white bedsheet wrapped around him makes the hunter largely invisible even to the most suspicious of ducks....

Don't be discouraged if your first experience hunting with the Sheet Ploy doesn't work out exactly right. Aside from feeling like a fool, you may have trouble getting settled in a way that will let you spring into action without becoming hopelessly tangled in the sheet. You may feel like a gunfighter in a full-length raccoon coat.

Let's say I have six decoys floating in a likely pond. Above the horizon a large flock of mallards is coming right in, wings set, rocketing down from a thousand feet. I peer at them from under the sheet, feeling like a vigilante. When they are on top of the decoys I make my move, but I am standing on the critical edge of the sheet

and manage only to topple over backwards. Still hoping for a shot at the terrified ducks, which are climbing out of there as fast as possible, I raise the gun and the wind blows a corner of the sheet up over my eyes.

But let's assume I manage to make a version of the Sheet Ploy work. Now I'm on the back porch, both hands full of ducks. A surprising number of hunters lose interest at this point. Some say picking the birds is too much work; others lack any interest in them as table fare.

**I**t's my opinion that wild duck is one of the most superb game meats in the world. If you like steaks well done, you might as well stop reading right here. Eating a well-done steak is not unlike eating an alarm clock. You won't like a fully cooked duck either....

Unless you hunt the southern part of the range where weather is apt to be a bit on the warm side, ducks are best hung. Where weather is always cool, as it is in Montana, five days is about right. Clean the birds but leave them feathered. The purpose of hanging is to tenderize as well as help develop the flavor. All the birds feed on grain and corn and are universally sweet tasting.

Wild duck has less fat than the leanest of beef filets. Therefore, the main error to avoid in preparing them is overcooking. An overdone wild duck is loathsome and inedible.... Any meal of wild duck is a special treat, special enough to make even the most resolute complainer forget about how frustrating it was to pull those pinfeathers, or how cold the pond was as it came in over the top of the hip boots when reaching for the prize. 🐼

# The **CHILL** of the **HUNT**



*The lazy days of autumn are long gone, and winter has arrived with its sharp, bitter bite. Thigh-deep snow, punishing winds, temperatures low enough to stick bare fingers to bare metal. Is it insanity, venturing out in weather like this? Not if hunting seasons remain open...*





*On warm, sunny days, hunters hoping to see game will do best to stay home. Snow is what pushes elk down from the mountains, and cold gets deer moving. Mallards won't hurtle south from Alberta without arctic winds nudging them along. For those who understand what makes wildlife tick, the worse the weather the better...*



DECEMBER



DECEMBER



*The cold is forgotten, however, with the flush of a rooster or the sight of incoming geese. Then it's back, in fingers, toes, even the ribs. That's when it's time to warm up with a fire—if you have the know-how. If not, there's always the truck. 🐾*



*Can't fool the computer*

Game warden Jon Obst, Libby, stopped two anglers along the Bull River in northwestern Montana and asked to see their fishing licenses. One angler produced his, but the other only had last year's and said his new one was back at the RV park where he was staying. Obst said he would visit the RV park the next day to check if the angler was telling the truth. After finishing his rounds, the warden went home and checked the angler's name on his computer through FWP's automatic licensing system (ALS). Obst saw the angler didn't have a current license. Then, while he was writing down the information from the computer, he saw that the angler's ALS number suddenly acquired a current fishing license. The angler had obviously raced from the river to the nearest outdoors shop, hoping to outfox the warden. Obst looked up the number of the license dealer, called the store, and asked the clerk if he could talk to the angler who had just bought his license. "I wish I could have seen his face when I told him who I was," says Obst, "and that I definitely will be seeing him the next day."

*Like shooting fish in a reservoir*

FWP warden Lennie Buhmann, contacted by the Rosebud sheriff's office, was called to Tongue River Reservoir, where he found a man shooting fish from a boat with a high-powered scoped rifle. The "angler" was issued a citation for fishing by unlawful means.

*Sign of the times*

FWP warden Matt Strozewski learned that a large metal sign had been taken from an FWP fishing access site on the Yellowstone River near Sidney. Later, a local motel

owner reported that his room cleaner had seen an FWP sign hanging in one of the motel rooms that was rented as an apartment. When Strozewski visited the room later that day, the tenant claimed to know nothing of a missing sign. When the warden pointed to the large sign hanging in plain sight on the wall of the room, the tenant replied, "Oh, you mean *that* sign."

*Catch-and-release?*

Biologist Jon Cavigli was helping at an annual fishing event on Flathead Lake when a family of anglers unloaded six lake trout all caught by a daughter who looked to be about eight years old. Cavigli volunteered to clean the fish, and while filleting the third one he noticed it had a bulging stomach. He slit it open and out popped a yellow perch, still alive. "Look at that fish jump!" said the girl, who grabbed the perch and ran down to the lake, where she released the fish and watched it swim away.

*Publicity bound*

Acting on an anonymous tip, several game wardens learned that a Great Falls hunter had killed a big bull elk in a closed area of the Sun River Wildlife Management Area. While looking for evidence, the wardens were happy to learn that the alleged poacher had stopped by the newspaper in Cut Bank to show off his kill, allowing the paper to print a picture of him with the elk. After obtaining a search warrant, the wardens seized elk antlers and meat from the man and made a positive DNA match between the confiscated meat and a gut pile at the WMA where the poacher had been seen killing the elk. The man eventually pleaded guilty, paid a \$1,000 fine and \$8,000 in restitution, and lost hunting and fishing privileges for 20 years. No word as to whether he kept the newspaper clipping.

*"Dude, check out this basil!"*

Two men illegally hunting deer at night near a ranch were captured by local law enforcement officials after they crashed their car trying to make a getaway. Afterwards, while working on the case, game wardens Bill Dawson (Colstrip), Jim Smolczynski (Forsyth), and Rick Schmauch



(Hardin) became suspicious when the suspects kept asking to retrieve their "cell phone" from the car's glove compartment. After obtaining a search warrant, the local sheriff looked in the glove box and, instead of a phone, found a bag of green leafy material. The leaves turned out to be a mix of basil and other common kitchen herbs. Apparently the poachers had purchased what they thought was a bag of marijuana shortly before their accident but had not carefully checked its contents. After being charged with unlawfully killing deer and felony criminal endangerment for firing rounds into ranch buildings, they were given their basil mixture back.

*Two tough trout*

A 32-inch bull trout astonished FWP biologists by surviving a trip through the turbines at Libby Dam in northwestern Montana. The fish, tagged after spawning in a stream in British Columbia, was tracked making the 100-mile trip down to Libby Dam. After negotiating the turbines, it went downstream another 40 miles and over the turbulent Kootenai Falls to O'Brien Creek, where it spawned the following fall. Apparently the trout was unshaken by its adventure the previous year.

Another bull trout was radio tagged after spawning in Quartz Creek, a tributary to the Kootenai River above Kootenai Falls. Trackers lost the fish for a short time; then it reappeared below Kootenai Falls. The next autumn, biologists were stunned to find the same bull trout in Quartz Creek, having somehow swum up the 175-foot-high series of waterfalls. Biologists had not thought it possible for a trout to bypass the falls, which have long been considered a historic barrier to upstream migration. 



TOM DICKSON

**WORKING FOR WILDLIFE** This 15,000-acre conservation easement on the Sieben Ranch, near Helena, provides productive forage for cattle while protecting and enhancing deer and elk habitat.

# Off to a Great Start

Since it began in 1987, Habitat Montana has helped ranching families statewide while protecting and enhancing more than 200,000 acres of wildlife habitat **BY TOM DICKSON**

**T**HE BREWER RANCH, in southeastern Montana's Powder River County, is proof that conservation-based land-use practices can restore both forage and wildlife. In the 1980s, the 40,000-acre spread was leased and grazed continuously throughout spring, summer, and fall. As a result, woody species such as wild roses nearly disappeared, and many acres were infested with cheat grass, an invasive exotic.

Then in 1994, The Page-Whitham Land and Livestock Company signed an agreement with Montana Fish, Wildlife & Parks that put nearly 18,000 acres of the ranch into a conservation easement. As part of the agreement, the ranch began a rest-rotation livestock grazing system, in which cattle are moved periodically so that grasses in rested areas can flourish.

And they did. Over time, native perennials such as western wheatgrass, which some

years grew knee high, pushed out the exotic plants. And wild roses and other shrub species sprung up around stock reservoirs.

Cattle weights increased from the additional forage, and wildlife populations flourished in the abundant habitat.

"The ranch manager at the time told me that when he first came on to the Brewer Ranch, he found sharp-tailed grouse only along the Powder River," says Steve Knapp, who for years was the FWP wildlife biologist in Broadus. "But after beginning the rest-rotation grazing, he saw sharptails spread across the entire property."

As wildlife numbers increased, so did hunter use, which climbed from 182 days afield on the property in 1988 to nearly 600 in 2002. The antelope harvest during that time grew from 14 to 50, and the mule deer harvest increased from 36 to 52.

"The Brewer Ranch is a great example of

what conservation easements can do—for the land, for wildlife, for the landowner, and for the hunter," says Knapp, now chief of FWP's Wildlife Habitat Bureau.

Conservation easements are the core of Habitat Montana, a program established to protect and enhance wildlife habitat across the state while also supporting conservation-minded ranchers and other landowners. The program was established after hunting and conservation groups urged the legislature to create a funding source that FWP could use to protect critical habitat. In 1987, the legislature passed a bill (HB 526) that set aside roughly \$3 million per year in hunting license revenue to preserve and enhance important wildlife lands. The legislature directed FWP to spend the money primarily on conservation easements.

The program arrived just in time. Over the past several decades, Montana has seen enormous land-use change. Analysis by the federal Natural Resources Conservation Service show that the amount of developed land in Montana has increased roughly 25 percent over the past 20 years. And according to a study by American Farmlands Trust, a national nonprofit organization working to protect high-quality agricultural land, Montana has more prime ranchland at risk of low-density residential development—5 million acres—than any other Rocky Mountain state.

Habitat Montana helps protect prime wildlife land, and it improves habitat by encouraging wildlife friendly land-use practices. Landowners who enter into conservation agreements agree to use rest-rotational grazing, protect sagebrush grasslands from burning and herbicides, and conduct timber harvest in ways that sustain forest health.

Since its inception, Habitat Montana has helped 30 ranch families conserve more than 200,000 acres of wildlife habitat with no tax dollars spent or property taxes lost. Supported by a broad range of Montana organizations and interests, the program provides landowners with a way to retain control over their property while also helping the wildlife that live there.

"We didn't do this for our benefit," says Lloyd Maher, who, with his wife, Sandra, sold FWP a conservation easement on 880 acres in fast-developing Gallatin County,

next to the Bridger Mountains. "We did it for the mule deer, so they'd have some open space, something that wouldn't be developed."

Conservation easements are voluntary legal agreements made with willing sellers in which FWP typically pays a landowner 40 to 45 percent of the value of the property. In return, the landowner agrees to keep the land in traditional agricultural use, employ agricultural practices that benefit wildlife, and forgo major development opportunities. In addition, most easements provide public access for hunting.

Landowners still own the property and can sell or pass it on to heirs. But the title carries the agreed-upon terms of the easement, which are negotiated to remain with the land "in perpetuity," or forever.

According to Stan Meyer, of Great Falls, some ranchers see easements as a way to perpetuate their rights as landowners. "I've had them tell me, 'If my neighbor can decide to subdivide, I can decide not to subdivide,'" says Meyer, who co-chairs the Coalition for Reauthorization of Habitat Montana with Paul Sihler, a conservationist in Helena. "They point out that subdivision is in perpetuity, too, that once broken into smaller pieces, subdivided ranches will never again become an economic unit."

One big benefit of conservation easements is that they can help preserve family ranches. Many landowners use easement payments to keep their ranch running or improve their operation.

"We worked with FWP on a conservation easement to conserve wildlife habitat and reduce our debt load," says Donna



GARYRAMER/NET

"We didn't do this for our benefit. We did it for the mule deer, so they'd have some open space, something that wouldn't be developed."

—LLOYD MAHER, BELGRADE



MONTANA FWP

Lloyd and Sandra Maher sold FWP an easement in fast-developing Gallatin County, adjacent to the Bridgers.

Hirsch, who, with her husband, Les, sold a conservation easement near Miles City that sustains more than 10 miles of rich riparian habitat along the Tongue River. "As a result, we were able to purchase additional ranchland. To us, it just made good business sense."

While Habitat Montana is helping conservation-minded ranch families, it simultaneously benefits wildlife habitat. FWP wildlife biologists across the state identify habitats that are either rare, highly productive, or threatened by development. They then work with landowners who have expressed interest in selling an easement on lands containing these critical habitats.

Once a price is negotiated, FWP drafts an environmental assessment and a management plan that are distributed for public comment. After public hearings, the FWP Commission decides whether to buy the easement. All easements costing more than \$100,000 or involving more than 100 acres must be approved by the State Board of Land Commissioners, composed of the governor, attorney general, secretary of state, superintendent of public

instruction, and state auditor.

One of the myths surrounding conservation easements is that they take land off the tax rolls. Not true, says Meyer. "Montana law ensures that conservation easements may not be reclassified with lower assessed values that would reduce property taxes," he explains.

Another misconception is that Habitat Montana, while helping Montana's wildlife and ranchers, is using tax dollars needed for education, health care, and other state needs. "That's not true either," Meyer says. "Hunters pay for this program with an earmarked portion of their license fees. There's no loss of tax revenue and no cost to taxpayers."

Meyer notes that the authorizing legislation for Habitat Montana sunsets in 2006. If lawmakers don't reauthorize the program in the 2005 legislative session, he says, Habitat Montana will no longer exist.

Between now and then, the retired advertising executive will continue beating the bushes for support. "So far, we've got an incredible number of citizens and groups supporting reauthorization," he says. "And no wonder. Habitat Montana is helping maintain family-owned ranches. It's protecting wildlife habitat. And it's providing hunting access. These are some of Montana's most cherished traditions, and people want to see them continue." 

## Critical Acquisitions

As directed by the state legislature, FWP mainly uses Habitat Montana dollars to buy conservation easements.



MONTANA FWP

Ninepipe WMA.

But FWP has also used the funds to purchase critical habitat outright, as allowed by law. For instance, more than 650 acres of wildlife-rich wetlands were added to the Ninepipe Wildlife Management Area, in the Mission Valley. The department also bought 120 acres on Missoula's Mount Jumbo as part of a larger effort to maintain winter elk habitat and open space. And in the Yellowstone Valley, the Dome Mountain WMA was nearly doubled in size to help accommodate resident elk as well as elk leaving Yellowstone Park during severe winters.

Tom Dickson is editor of Montana Outdoors.

## RECOMMENDED READING

### ENCYCLOPEDIA OF THE GREAT PLAINS.

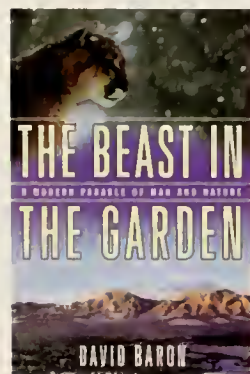
David J. Wishart, editor. Lincoln, Nebraska: University of Nebraska Press. 2004. 919 pp. Hardcover. \$75.

Stretching from Calgary to Fort Worth, the Great Plains covers more than 750,000 square miles of central North America. Distinguished by frequent drought, a flat landscape, (once-) abundant grasslands, and relatively few human inhabitants per square mile, the Great Plains has been disparagingly called "the Great American Desert" and "flyover land." Yet this immense region is also home to extensive Indian and pioneer history, rich literary traditions, abundant gas and oil resources, and soil so fertile it has earned the region the name "breadbasket of the world." Funded by the National Endowment for the Humanities, the 919-page *Encyclopedia of the Great Plains* is as vast as the region it covers. With 1,316 entries contributed by more than 1,000 scholars, this ground-breaking reference book captures all that is vital and interesting about the Great Plains.



**THE BEAST IN THE GARDEN: A MODERN PARABLE OF MAN AND NATURE.** David Baron. New York, New York: W. W. Norton & Company. 2004. 278 pp. Hardcover. \$24.95.

On January 16, 1991, an emergency rescue team discovered the body of Scott Lancaster in a wooded ravine 20 miles south of Boulder, Colorado. The high school senior athlete had been killed and partially eaten by a mountain lion. In *The Beast in the Garden*, journalist



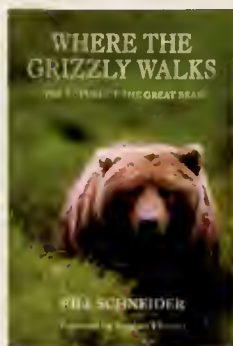
David Baron tells the spellbinding story of how mountain lions began repopulating the Rocky Mountain Front while Boulder was spreading farther into the wilds. And how the city followed a path paved with good intentions that led to Colorado's first recorded fatal mountain lion attack. *The Beast in the Garden* is more than a gripping account of one community's struggle with wildlife, however. It's a tale of America's future, where suburban sprawl and wildlife protection laws put people and wild animals into increasingly uncomfortable—and deadly—proximity.

**A GUIDE TO NIGHT SOUNDS.** Lang Elliott. Mechanicsburg, Pennsylvania: Stackpole Books. 2004. 62 pp. Softcover with CD. \$19.95.

This is less a book than a CD, but it's one worth recommending because kids and adults will enjoy learning the nighttime sounds of common mammals, birds, amphibians, and insects. For example, that loud exhale *Whiew!...Whiew!* is an alarmed white-tailed deer; that melodic, dreamlike trill is an American toad; and those nasally *peent* sounds heard along many rivers are from nighthawks soaring overhead.

**WHERE THE GRIZZLY WALKS.** Bill Schneider. Guilford, Connecticut: The Globe Pequot Press. 2004. 275 pp. Hardcover. \$19.95.

Dozens of books have been written on grizzly bear attacks, behavior, biology, and lore, but this is the only one we know of devoted entirely to grizzly conservation. Author Bill Schneider, of Helena, first published *Where the Grizzly Walks* in 1977, at a time when grizzly populations south of Canada were plummeting. "Now," he writes in this newly updated edition, "the grizzly is expanding its range into habitat it hasn't used in 50 years." That doesn't mean the big bear is safe, however. Habitat loss, housing developments, and genetic isolation are among the threats that keep the grizzly among the world's most



endangered animals, Schneider says. The grizzly advocate believes that grizzly bear populations deserve protection but also require some control, including carefully regulated sport hunting. That position does not win him many friends among his peers in the bear-lover crowd, but he believes it's an opinion, among many, that needs expressing if grizzly bears are to survive and thrive in an increasingly developed world.

**OLD FAITHFUL INN: CROWN JEWEL OF NATIONAL PARK LODGES.** Karen Wildung Reinhart and Jeff Henry. Emigrant, Montana: Roche Jaune Pictures, Inc. 2004. 144 pp. Softcover. \$17.95.

For 100 years, Old Faithful Inn has welcomed guests both poor and presidential to its comfortable-yet-rustic accommodations, which meld beautifully with the surrounding wilderness setting. *Old Faithful Inn* is a

### Old Faithful Inn



Crown Jewel of National Park Lodges

By Karen Wildung Reinhart and Jeff Henry

tribute to this great lodge, which Yellowstone National Park historian Lee Whittlesey calls "an icon of both Yellowstone National Park and the entire park system." Photographer Jeff Henry and writer Karen Reinhart, both longtime park employees, have produced a book that tells why the inn was built and how it has endured a century of brutal winters, nearby earthquakes, raging wildfires, and millions of visitors. In addition to revealing the stories behind the inn's famous features, such as the fanciful Crows Nest above the lobby and the fortresslike front doors, *Old Faithful Inn* is also a tribute to the hundreds of men and women who built, restored, and preserved what has become a landmark as famous as the geyser for which it is named.

**THE COMPLETE GUIDE TO MULE DEER HUNTING.** Sam Curtis. Guilford, Connecticut: The Lyons Press. 2004. 284 pp. Hardcover. \$24.95.

Most deer hunting books are either too basic ("Dress in layers!") "Scouting is impor-

tant!") or too esoteric ("In this next chapter, I'll discuss high-altitude pre-rut skalking strategies") to be of much use to the average hunter. *The Complete Guide to Mule Deer Hunting* strikes the right balance between common sense advice and expert insight. Longtime *Field & Stream* contributor Sam Curtis, of Bozeman, has collected some of his best magazine articles to provide a well-rounded book on hunting this popular big game animal. In addition to his decades of hunting experience, Curtis draws upon the knowledge and wisdom of wildlife biologists, giving his suggestions and advice scientific validity.

## ROCKY MOUNTAIN ELK PORTFOLIO.

Donald M. Jones. Helena, Montana: Far-country Press. 2004. 120 pp. Hardcover. \$24.95.

Eighteen years ago, wildlife photographer Don Jones, of Libby, gave up his day job. Since then, he has taken thousands of elk photographs, many of which have been published in *Montana Outdoors*, *Audubon*, *Field & Stream*, and other magazines. In *Rocky Mountain Elk Portfolio*, Jones has compiled 153 of his top elk images into an exceptional visual study of the West's most majestic ungulate.



**PRAIRIE GHOST: PRONGHORN AND HUMAN INTERACTION IN EARLY AMERICA.** Richard E. McCabe, Bart W. O'Gara, and Henry M. Reeves. Boulder, Colorado: University Press of Colorado. 2004. 176 pp. Hardcover. \$29.95.

For millennia, hunters on the North American continent have watched, hunted, and revered pronghorn (commonly but mistakenly called anelope). In *Prairie Ghost*:

*Pronghorn and Human Interaction in Early America*, three prominent wildlife biologists explore the fascinating relationship between people and the world's fastest hooved mammal. Published by the Wildlife Management Institute, *Prairie Ghost* explains how American Indians hunted pronghorn by driving, decoying, and stalking, and how the animal provided meat, tools, insulation, and a soft leather. Like bison, the great herds of pronghorn were once roving supermarkets. Included in this comprehensive work is an appendix of eyewitness accounts from 1540 to 1896, more than 400 Native American names for the species (from the Apache's *ja-gê* to the Zuni's *ma'-wi*), and a 16-page color insert with rarely seen pronghorn art by John J. Audubon, Carl M. Rungius, Francis Lee Jaques, and other renowned wildlife artists.



**RIFLE IN HAND: HOW WILD AMERICA WAS SAVED.** Jim Posewitz. Helena, Montana: Riverbend Publishing. 2004. 111 pp. Softcover. \$9.95.

Jim Posewitz fears that hunters are fast losing something as important as hunting access and wildlife habitat: They are forgetting hunting's importance to America and the great contribution hunters have made to conservation over the past century. A nationally recognized hunter education expert and for years one of Montana FWP's senior officials, Posewitz has written about what he considers the greatest conservation story of all time: why and how hunters saved wildlife and wildlands in North America. In *Rifle in Hand*, he tells the story of hunter-conservationists such as George Bird Grinnel, Ding Darling, Aldo Leopold, and Theodore Roosevelt, who overcame market hunting, environmental destruction, and political intransigence to restore wildlife to today's astonishing abundance. In this slim volume, he urges hunters to continue fighting for the democratic princi-

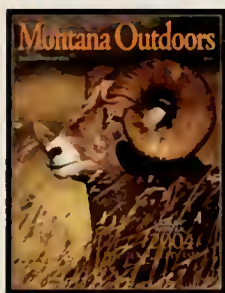
ples that wildlife belong to all people and that all people should have the opportunity to wander wild places, rifle in hand. "What we understand," writes Posewitz, "we can honor and sustain. Only fully understanding our past will we be prepared to meet our obligations to take the hunter's heritage forward to another generation."

**THE ART OF REMINGTON ARMS.** Tom Davis. Columbia, South Carolina: Sporting Classics and Remington Arms Co. 2003. 192 pp. Hardcover, \$60; Deluxe Edition, \$125.

Not so long ago, hunters' perceptions of their sport and themselves were shaped largely by a handful of exceptional wildlife artists. This was before outdoors photography dominated the look and feel of the outdoors. Artists such as Bob Kuhn and Tom Beecham captured moments of a hunter surprised by a grizzly, sawing logs while a trophy buck bounded past, or hunkered in a blind as a flock of divers approached. Many of these and other famous outdoors images have been collected in *The Art of Remington Arms*. The coffee-table book showcases great artists who created pairings and illustrations for posters, advertisements, and calendars produced by the Remington Arms Company over the past 150 years. Written by Tom Davis, the country's foremost sporting and wildlife art writer, this lushly illustrated volume contains fascinating insights into the early painters who did Remington commissions, such as N. C. Wyeth, Lynn Bogue Hunt, and Philip R. Goodwin. *The Art of Remington Arms* also includes separate chapters on Kuhn and Beecham, as well as a chapter on the captivating if highly improbable Remington Bullet Knife paintings created by Larry Duke. 🐾



# 2004 MONTANA OUTDOORS INDEX



## January/February 2004

23rd annual photo issue. We celebrate in pictures the beauty and grandeur of Montana's landscapes, flora, fauna, and state parks.

## March/April 2004

**Cold Turkeys.** Could this great game bird thrive elsewhere in our chilly state? *By Andrew McKean*

**On the Trail of the Elusive Morel.** How to find, harvest, and safely cook Montana's most delectable mushroom. *By Ellen Horowitz*

**A Place of Peace.** Chief Plenty Coups State Park commemorates the great Apsálooke warrior and his legacy of harmony and goodwill. *By Bert Gildart*

**Death by Garbage.** How trash is "killing" grizzlies and stifling the bears' natural expansion. *By Bill Schneider*

**Montana's Avian Spectacle.** Freezout Lake each spring is a bird watcher's paradise. *By Bert Gildart*

**Tough Love.** Killing some fish in order to save others. *By Brian Marotz*

**Our Point of View:** State Parks Are Now More Affordable

**Out Here:** High Wire Act

**Outdoors Portrait:** Muskrat

**Parting Shot:** Turkey Lurking

## May/June 2004

**From Here to There.** Montana's trail system. *By Jeff Erickson*

**Trout Above the Clouds.** Tips on finding and catching trout in Montana's scenic mountain lakes. *By John Fraley*

**Waterfalls.** *Photo essay*

**Meet Your New Neighbors.** Urban wildlife cause problems and even endanger human life. *By Sam Curtis*

**Left in the Dust?** Montana's fluvial arctic grayling could be doomed. *By Tom Dickson*

**What's Up Down There?** Finding fish in supposedly "fishless" streams. *By Dwayne Andrews*

**Why Montana Went Wild.** The scientist whose research helped rev-

olutionize trout management 30 years ago.

**Our Point of View:** We're Working to Delist

**Out Here:** Net Results

**Out Here:** Rattlesnake!

**State Parks Calendar**

**Outdoors Portrait:** Moose

**Parting Shot:** Rock On!

## July/August 2004

**Huckleberry Hounds.** Sniffing out Montana's delicious purple gem. *By Ellen Horowitz*

**A Grizzly Biologist's Journal.** Pictures of bear-human conflicts. *By Mike Madel*

**Wonderground.** The marvels of Lewis and Clark Caverns State Park. *By Scott McMillion*

**You'll Never Believe What I Saw!** Montana's weirdest fish and wildlife sightings. *By Andrew McKean*

**Raptor Enrapture.** Watching birds of prey. *By Becky Lomax*

**Where Have All the Plovers Gone?** Looking for mountain shorebirds. *By Emily Wortman-Wunder*

**The Swift Fox's Speedy Return.** Why has this tiny canine returned to Montana? *By Tom Dickson*

**Lab Coat Detectives.** Scientists search for answers to perplexing biological questions. *By Sam Curtis*

**Our Point of View:** Bison

**Out Here:** The Big Ones That Didn't Get Away

**State Parks Calendar**

**Outdoors Portrait:** Golden-Mantled Ground Squirrel

**Parting Shot:** Room with a View

## September/October 2004

**Chilly Reception.** Why most elk returning to eastern Montana are not welcome. *By Andrew McKean*

**Game Warden "Glamour."** What it's really like. *By Dave Hagengruber*

**K911.** Keep your hound safe this hunting season. *By Tom Dickson*

**Confluence of Cultures.** Missouri Headwaters State Park. *By Sam Curtis*

**Will the Sun Set on Block**

**Management?** *By Tom Dickson*

**Song of the Land.** Listening to the prairie, while hunting its swiftest inhabitants. *By Lori Micken*

**Forty Years of Wilderness.** Celebrating the 1964 Wilderness Acr. *By Becky Lomax*

**Our Point of View:** Weather Trumps All

**Out Here:** A Different Angle on Hunting

**Wildlife Management:** The New Cow Elk Option

**State Parks Calendar**

**Outdoors Portrait:** Great Horned Owl

**Parting Shot:** "An Essential Point"

## November/December 2004

**Buffaloed.** What to do about bison spilling from Yellowstone National Park. *By Tom Dickson*

**The Sheep That Will Not Die.** Clinging to the myth of Audubon's bighorn. *By Brett French*

**A Big Prelude to the Little Bighorn.** Rosebud Battlefield State Park. *By Neil Mangum*

**Mountain Mallards.** A duck hunting essay. *By Russell Chatham*

**The Chill of the Hunt.** Is it insanity, hunting in weather like this? *Photo essay*

**Off to a Great Start.** The Habitat Montana Program. *By Tom Dickson*

**Our Point of View:** An Essential Session for Fish and Wildlife

**Out Here:** Some Things to Do Field Notes

**Recommended Reading**

2004 *Montana Outdoors* Index

**Outdoors Portrait:** Wolverine

**Parting Shot:** Battlefield Stars

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[fwp.state.mt.us/mtoutdoors](http://fwp.state.mt.us/mtoutdoors)

# Wolverine

(*Gulo gulo*)

**FWP WILDLIFE** technician Mike Ross and I brought our snowmobiles to a sudden stop at the sight of large tracks crossing the forest road. The inch of fresh snow had produced perfect conditions for our winter furbearer track survey. Upon closer examination, we saw that the nearly 5-inch-wide bearlike tracks revealed five toes, each with a claw mark, a chevron-shaped footpad, and an additional heel pad. It was the track of a wolverine, one of the most legendary and elusive furbearers in North America.

**APPEARANCE** At a glance, a wolverine looks like a small bear. It has a thick body, short legs, short ears, and a broad, flat head. But the similarity ends there. Wolverines have an arched back and a foot-long, bushy tail. They weigh between 15 and 30 pounds and vary in length from 36 to 44 inches, tail included. Males are typically one-quarter larger than females. Wolverines are active all year and do not hibernate. During winter, a wolverine's coat becomes long and dense and its feet are covered with stiff hair that helps it walk on snow. The wolverine's fur is dark brown to black, with light brown to yellowish stripes running from each shoulder along the flanks to the base of the tail, and white markings on the chest. The wolverine has large teeth and thick, long, non-retractable claws used for digging, holding prey, and climbing trees.

**BEHAVIOR** Also known as devil bear and skunk bear in various parts of northern North America, the wolverine is the largest member of the weasel family. Its scientific name, *Gulo gulo*, is Latin for glutton and refers to the animal's eating habits. Wolverines are extraordinarily powerful animals that can quickly dig a tunnel through 8 feet of snow to reach a frozen animal carcass. Viselike jaws can easily crush elk and deer bones. They also have a keen sense of smell and exceptional hearing, though their eyesight is poor compared to that of deer and elk. A wolverine has tremendous physical endurance and may travel 30 to 40 miles a day in search of food. Active primarily at night, this solitary creature requires a large territory of up to 400 square miles.

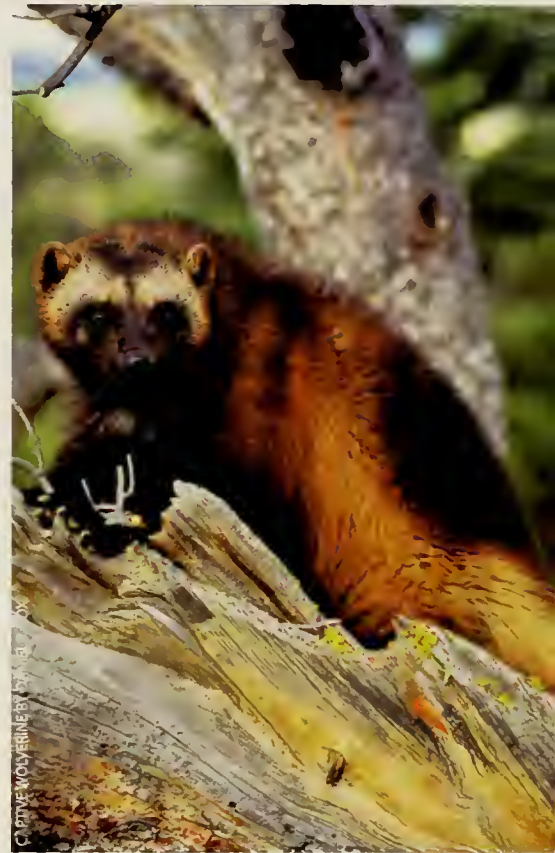
**FOOD HABITS** An opportunistic feeder, the wolverine eats about anything it can find, from berries and nuts to small animals and even big game. Its main food source is carrion, especially during winter and spring. Many deer and elk that die in winter are eventually found by wolverines, which will eat their fill and then drag the carcass—up to five times their own weight—to a cave or other cache site. Vicious fighters, a wolverine will savagely defend a kill or carcass, driving off wolves and even grizzly bears. Wolverines prey on marmots, ground squirrels, snowshoe hares, porcupines, grouse, and occasionally mice and voles.

**REPRODUCTION** Like all members of the weasel family, wolverines

reproduce by what is called delayed implantation. Females breed in summer, but the embryos don't implant for several months, finally developing into fetuses in early winter. Birth takes place a few months later, in late January through April. One to three young are born under deep snow in dens containing tunnels up to 180 feet long. Young wolverines, called kits, develop rapidly and are weaned within two months. Roughly four months later, the

young wolverines begin foraging for themselves. Wolverines attain most of their adult size and weight within their first year.

**MANAGEMENT** Montana maintains a healthy wolverine population due to the state's abundant wilderness areas, national parks, and roadless lands, which serve as refuges for this solitary species. Snow track surveys and harvest records indicate that wolverines also live in nearly all mountain ranges in western Montana, even those with roads, ski slopes, and other development. Apparently, the wolverine tolerates human activity as long as it has enough mountainous, forested habitat and can fill its belly. New research is investigating the relationships between wolverines and winter recreation, timber harvest, rural development, and trapper harvest.



Montana is the only state other than Alaska to provide a resident wolverine season. Over the past 25 years, the state's healthy, well-distributed population has allowed for a consistent average yearly harvest of 10 wolverines. FWP biologists examine the pelts and carcasses of all harvested animals to determine their age, sex, genetic makeup, reproductive history, and condition.

Trappers prize the wolverine because of its rarity, elusiveness, and place in the lore of wilderness trapping and hunting. The dense guard hairs don't accumulate frost, making the fur highly valued for parka hood trim, especially in Russia and China. Most trappers lucky enough to capture a wolverine tell me they have it mounted to preserve the image of an animal that symbolizes the harsh, wild conditions of the North American Rockies. 🐾

**BY BRIAN GIDDINGS**

*Brian Giddings coordinates FWP's Furbearer Program.*

## BATTLEFIELD STARS

Photographer Kevin Brooke, of Billings, has spent countless hours in remote areas across Montana, but there was something especially eerie about the evening he set up his camera at Rosebud Battlefield State Park, in Bighorn County, just a few miles north of the Wyoming border. Brooke had spent the afternoon photographing the site of a pivotal 1876 battle between General George Crook's soldiers and Chief Crazy Horse's warriors (see article on page 16) and was filled with thoughts of war, death, and heroism. "As the sun went down," says the photographer, "coyotes started howling, and I tell you I've never heard so many coyotes in my life. The park is full of mystery, and the sound of those coyotes made it all the more so. You look out over that vast openness and can sense that something significant has happened there." With the sun setting and the coyotes at full volume, Brooke decided he'd try an experiment. "I set up a camera and kept the shutter open for four hours, late into the night. I wanted to photograph the stars inching across the sky over the battlefield, to capture the mystery of the park and the feeling of inspiration I got while I was there."

Montana Outdoors November/December 2004



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